

## THE BASIC OUTLINE

OF

## UNIVERSOLOGY.

AN INTRODUCTION TO THE NEWLY DISCOVERED SCIENCE OF THE UNIVERSE: ITS ELEMENTARY PRINCIPLES; AND THE FIRST STAGES OF THEIR DEVELOPIENT LI THE SPECIAL SCIENCES.

TOGETEER WITH
PRELIMINARY NOTICES OF ALWATO (ahl-vcah-to), THE NEWLY Discovered SCIENTIFIC UNIVERSAL LANGUAGE, RESULTING FROM THE PRINCIPLES OF UNIVERSOLOGY.

BY

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"Discoveries in Chinese," etc.



REVELATION THROUGH SCIENCE; PHILOSOPHY OF INTEGRALISM; ADVENT OF the reconciliative harimony of ideas.

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## INTRODUCTION.

During several years past, my personal friends, and, to some extent, the Scientific World at large, have been made aware that claims existed to the discovery of a new Science of Unparalleled Extent and Importance, under the name of Universology.

The time having arrived for a more formal and public announcement, and for the partial exposition of the Science itself, I prefer, for various reasons, to rely for first impressions upon the statements of others who have had opportunity to know of its nature, rather than to stand upon my own unsupported estimate and affirmation of its value;-in advance, I mean, of the study of the work itself; for when people are invited to a laborious undertaking, they require to be certified from some source that it is likely to repay them their effort. I shall therefore embody in this introduction several papers on the subject of the Science from pens other than my own.

The testimonials which follow are wholly from persons among those whose opportunities for knowing have been the best of which the infantile and developing stage of the Science itself would admit, in the absence of other Text-Books than miscellaneous and cumbersome manuscripts which were subsequently to be recast and perfected for publication. They are from among the members (Professors and Students) of the Practical or Working University, which, during these several years past, the quiet but profound and extended elaboration of the New Science has spontaneously called to my aid, and organized into a Volunteer Corps of generous and efficient helpers.

One of the additional reasons for the introduction of these pièces justificatives is the unavoidable fact, that in so condensed an exhibit as the present volume contains of the New Science, some statements occur in the body of the work which, at the time they are adduced, do not admit of a proof amounting to demonstration. The Reader or Student will, therefore, at times be required to labor through a preliminary exposition embodying propositions which will only be completely established by the reflection of light thrown back upon them from a subsequent exhibition and treatment of other departments of the great subject, more adapted to exactness of demonstration. There might be a liability, therefore, that the Student, aware of the high
demands of rigorous Scientific method, should receive erroneous impressions, in consequence of these necessary conditions of the subject, before arriving at the key of the Science, unless his faith was somewhat stimulated by the authority of those that had gone before him.

It is now more than five years since the discovery of Universology was an accomplished fact-satisfactorily so to my own mind. It is about that period since the paper which follows, from the pen of Mr. Freeland, substantially as it now appears, was printed, and distributed to some extent, as a circular letter. In the meantime incidental announcements have appeared in the Continental Monthly, in the Evening Post, in the Home Journal, of this city (New York), and elsewhere.

During the whole term of these five years I have been engaged in struggling with the problem of presentation. The immensity of the field, the necessity for lucidity, and the novel character of the scope of investigation, together with the method pursued, all concurred to make the task one of extreme difficulty.

It is obvious, on reflection, that there must be a Science of the Universe as such, as distinguished from the Special Sciences of the Parts or of the Spheres or Domains of the Universe; and yet the very idea is one which is hardly entertained with any clearness of conception in the Scientific World.

All Philosophy has indeed aimed, in a sense, at this result, but the methods of Speculative Philosophy are too vague to satisfy the demands of the Scientific World, and in the sense of a Science properly so called, the idea of anything Universal has been almost entirely wanting. The Scientific men are Specialists. Their labors are as if a colony of learned ants were to have undertaken the investigation of the Human Body. One section of the little Community devotes itself to the exhaustive examination of a finger nail, another to that of a lobe of the ear, another to that of the hair of the beard, and others to the investigation of all the various parts and organs and systems, segregated and regarded singly; but they have been so busy in these special and minute examinations, that it has never occurred to any one of them to guess even, or, in any event, to give a due consideration to the fact, that all of these various subjects are the parts and constituents of a Man; and that, therefore, the first thing to know, logically speaking, in order to know anything rightly, of these particular subjects, is the General Design and the Exact Outlay of the Man himself.

Suppose, however, this idea to be finally attained to, and the principles of this larger Science discovered; still, the question of the best
method for the presentation of a view of all these Subjects in their relations to each other, under this new and unifying aspect of the entire case, would be a problem quite distinct from that of the original discovery, and hardly less difficult of solution.

Placed in a situation similar to that above intimated, I had, until recently, despaired of the possibility of a moderately brief exposition of Universology. I had elaborated in great part a work to consist of no less than Seven Volumes of the size of the present one. Early in the year Eighteen Hundred and Sixty-Six, however, I had so far mastered the subject myself, as to see my way clear to the abridgment and condensation of the primitive plan, which I regarded, when seen to be practicable, as being in all senses desirable.

The Text of the present Volume was written, very nearly as it stands, during the year just mentioned, ending with the 13 th of September of that year. Another considerable period was required for revision and for the Commentary and Annotation. The year 180\%, lapping over into 1868, has been occupied in carrying the work through the press. I was assisted throughout its entire preparation by my friend, pupil, and coadjutor, J. West Nevins, as volunteer amanuensis, the manual labor of the production being thus almost wholly taken off my hands. The working University, organized in connection with the Discovery, has aided in various ways, critically and suggestively. I am indebted to my son, William S. Andrews, for considerable aid in the original designing of the illustrations. The Printers and Electrotypers, Smith \& McDougal, are entitled to all praise for their assiduity and promptness, and for the mechanical facilities which they have at command, as also Mr. Louis Pfenninger and Mr. L. Hauser, the intelligent, patient, and courteous compositors, who have executed the whole of this branch of the labor. My thanks are indeed due to so many parties, that I cannot attempt at present to enumerate all of my personal obligations in this behalf.

Professor M. A. Clancy, the author of the first of the annexed papers, was the earliest of my pupils and helpers in the elaboration of the New Science, -and of the New Language, adverted to, rather than in any sense expounded, or fully characterized even, in the present work,-if I except a noble and honored woman whose relation to the subject I hope to signalize more worthily on some future occasion.

Mr. Freeland was the next member of the incipient Universological conclave. He has acted as Assistant Pastor of the First Congregation of the New Catholic Church, which has an embryo existence in connection with the Theological Branch of the University. Some of his discourses embodying portions of the New Sciento-Religious Doctrine
will be published in the earliest collection of the Miscellaneous Documents which have accumulated in connection with our movement. (1)

Mr. Hoyle has been simply a student of the Principles and Scope of Universology, Alwato, and Integralism, in the limited way which the existing facilities for such study have rendered possible.

The relations of Mr. Nevins to my labors have been intimated above.
In respect to the body of the present work, the Reader will perceive that there are three varieties of matter: 1. The Text; 2. The Commentary; 3. The Annotation. The Text is the Basis of the other two. The Commentary consists of such additional original matter as has been prepared in direct connection with the Text, for its greater elucidation in minor particulars. The Annotation was intended to include extracts from other authors, and from my own previous manuscripts, upon points related in some measure to the subjects treated of in the Text or the Commentary. The line of demarcation between the character of the matter in the Commentary and that in the Annotation, is not always very distinct, and has rested, in many instances,
(1) By the New Catholic Church is meant, in the largest sense, the Church Unjversal, protended in Time and extended in Space. But in an especial sense there is meant by the term a Central and Representative Church embodying the idea of the Essential Reconciliation of Ail Religions, Sects, and Denominationswithout the renunciation of their denominational differences-upon the basis of the Principle revealed in Universology, that every Religious Development of the Past has been the Divine Expression of some Isolated Phase of the Higher Complex Truth. The New Catholic Church in this sense does not seek to found a new Sect merely, nor even to withdraw men from their Special Communions; but, on the contrary, to furnish a Representative Centre of Unity in the midst of this Complex Variety. It proposes, by the aid of a Science of Doctrines,-of their Significance and of their Relations to each other,-to do for the Sects, and for a Mother Churchwhich to secure Unity has heretofore punished Heresy and Dissent-what an International Congress, or, still better, an Organized Sciento-Spiritual Planetary Institute of Government, may do for all Existing National Governments. In other words, it is now Scientifically perceived that the Divine Type and Model of Unity is a Unity from Variety, and hence a Complex Unity, in the place of that Simple and Direct Unity which, in a first and provisional Stage of the Development of all human affairs, was naturally aimed at; and that such is the Procidential Significance of that unconquerable Tendency to the formation of Sects which, fortunately, no devotion to Unity has ever been able to defeat. This larger view may be denominated the Dcutero-Christian, as differing from, while yet, in a sense, developed from, the Proto-Christian Idea (Greek Deuteros, Smcond, Protos, First). The Drift and Expansion of the whole subject may best be seen from the attentive reading of the few last paragraphs of this work, from Text No. 1110 to the end; and, upon the principle that Extremes meet, it may not be inappropriate to request the reader to annex those paragraphs to this Introduction.
merely upon the feeling in my own mind of the relative importance of the matters involved in reference to their bearing upon the Text. This interblending of the characters of these two parts of the work has arisen in a great measure, also, from the fact that the Annotation has served as a receptacle for Comments upon the Commentary; often, then, returning, and passing again orer the same ground, from some new point of riew. Nerertheless it is possible that the Commentary and Annotation may become bases, respectively, for future enlarged Elaborations, and the Annotation ultimately for a truly Encyclopedic Accumulation of the materials extant in the literature of the World, related to those discussed in the Text; and that then the Primitive Discrimination of the rariety of Matter appropriate for each will be reestablished and made obrious.

## I.

## Paper contributed by PPofessor Clancy to the Introduction of Universology.

When a new discorery in some recondite department of human activity, mental or material, is achieved, the discoverer is placed in a peculiarly embarrassing position. Haring penetrated the hidden recesses of Being, and canght a glimpse of a hitherto unknown secret, and rendered enthnsiastic perchance by the riew, he immediately attempts the task of imparting to his fellow-men his new-found knowledge. At the very outset, however, of such a labor, an almost insurmountable obstacle presents itself: no language at command can adequately communicate the novel discovery. If new terms are coined, they are unintelligible; if those already in rogue are employed, they are liable to be misunderstood by reason of old and special associations.

This dilemma is necessary and inherent in the nature of the case. Until the discovery is embodied in some intelligible form, the explorer must be content to work solitarily, using whatever means are at hand to connect the new knowledge with that which is already extant, in such manner as to render it arailable for appreciation and acceptance.
Happily, howerer, there exists a subtle nexus between the different domains of the Cniverse; and a new discovery need not necessarily fail or be entirely lost. If not expressible in one set of terms, it may be in another. One department of knowledge becomes, as it were, a mirror, in which the others may be reflected ; and so a new discorery, if deroid of its own proper lingual clothing, may borrow a temporary dress from its neighbor.

In these pages, under the title of "Basic Outline of Universology," is given to the world the first announcement of a discovery the most stupendous in its scope, extensive in its applications, and far-reaching in its results. Its author has bestowed upon it no less a designation than "Universology, or The Science of the Universe." The object of this introductory statement-by one who has enjoyed the inestimable privilege of being a student of the science for the past seven years-is to give some brief outline of his estimate of its character, its importance and its bearing upon the destiny of the human race.

Universology is a Science which-owing to its peculiar character, the extent of its subject-matter, the intricacy and complexity of its applications, and the importance of its influence upon the interests of Human-ity-is beset, in the labor of making it understood and appreciated, with difficulties commensurate with its vastness. If the discorery of an isolated fact or principle be not easy of exposition and comprehension, the difficulty in the case of Universology is enhanced by so much as the whole is greater than a part. The problem is the more severe owing in part to the fact that the extreme simplicity of the fundamental aspect of the discovery is such that it is exceedingly difficult first to apprehend it, and then to express it in intelligible language; and in part to the novelty of view which the student is called upon to take of facts and phenomena with which he is already to a considerable degree familiar.

Prior to the modern revival of learning, scientific investigation was pursued in a great measure under an assumption of law in the minds of the investigators; and the consideration of external phenomena was conducted in accordance with such assumption. Cosmologies and Cosmogonies were produced in accordance with crude preconceived notions; and satyrs and other monstrosities held an undisputed position in the classifications of natural history. From the nature of this mode of procedure, its application was fruitless in adding to our stock of positive knowledge. Bacon, perceiving the deplorable and unsatisfactory results of this infantile practice, and casting aside all assumption of laws or principles unsupported by facts, inaugurated, more formally, what is known as the Inductive Method in Science, which busies itself with the investigation and notation of the phenomena of the Universe with a view to derive therefrom a correct knowledge of their underlying laws. For three hundred years this has been the accepted method in the Scientific World; and it has been settled in the minds of many that no other was or could ever be available or worthy of equal rank with it. The Baconian or Inductive Method of the past,
however, finds its culmination, and, in a sense, its logical termination in the discovery of Universology, and in the inauguration of what will be termed in the future the Andrusian or True Deductive Method applied to the Universe at large. This discovery has, therefore, a twofold character. It is not only a Science vast as the Universe in its scope, but a method of Scientific Procedure capable of application to every domain of Thought and Being, in the new investigations which will ever be demanded in exploring new special departments of Being.

An important fact, bearing upon the consideration of the subject, must not be overlooked here. The labors of the Scientific World have been and are still directed almost wholly to the observation and classification of the phenomena of the material, sensuous domains of the Universe, setting aside the consideration of the Spiritual or Mental as being too obscure to be subjected to the tests of scientific procedure. Abstract philosophy has had no part in the solution and settlement of scientific questions, and Metaphysics have been carefully and rigorously excluded from their just relations with the domain of Physics. The fact that the Science of the whole Universe has not been sooner discovered is no doubt partially to be attributed to this exclusion of one entire half of the field of investigation. The principal reason for this aversion of the scientific world to the consideration of the Spiritual or Immaterial half of Being is to be found, doubtless, in the fact that the method necessary for its investigation is one which stands in polar opposition to that of ordinary Science. An apt illustration of the difference between these two scientific modes is to be found in the History of Astronomy-one of the few sciences to which has been applied the True Scientific or Reflective process, and almost the only one, with the exception of Geometry, which furnishes an example of the stupendous results of the application of Demonstrative Reasoning. Until attention was turned away from the observation of external astronomical phenomena, and up to the period of the discovery that the earth possessed a motion in and of itself, the Science of Astronomy was not properly constituted. This turning away was a Reflective action; a seeking for the solution of the difficulty, not alone in the apparent motions of the things observed, but also in the real motion of the observer himself. The law of his motion once ascertained, a flood of light was immediately thrown-from a new and totally unexpected source-upon the hitherto inexplicable apparent motions of the planetary and stellar bodies. This result of the application of the Reflective process caused a total revolution in our method of aspecting the subject; and the standpoint (mentally speaking) of every astronomer to-day is the sun, and not the earth, as was the case with the ante-Copernican observers.

We can readily understand now, from a priori considerations, that until this important change occurred in the poles of astronomical observation, no true science of the subject was possible.
In like manner, the Science of the Universe points out that Scientists should seek for the explanation of all the varied phenomena of the Universe, not alone in direct observation, but as well in the laws of that which lies back of and observes those phenomena-in other words, in the laws of the Mind itself. It will be perceived that the Mind, as observer, holds a position, relatively to the Universe at large, analogous to that which the earth bears to the Sidereal heavens. Were there no Mind, it is evident there would be no external phenomena perceptible, since the Mind is the subject and agent in the perception and comprehension of those phenomena. Until, then, we explore the Mind itself, and learn the laws of its operation, all our knowledge of what is external to it will be characterized by that incompleteness and confusion which attached to astronomical science previous to the important discovery that the laws of the motion of the observer were the key to the obvious appearances of the astronomical Universe. The Mind is a great spiritual eye, revolving in all directions, the conscious Ego within taking note of external phenomena, as the earth is a great Sidereal eye, from which the observer notes the apparently incongruous motions around him.

In order, then, to the evolution of an exact Science of the Universe, the laws of the observing mind must become known; and this can only be accomplished, as we have seen, by looking in instead of looking outin a word, through the Indirect or Reflective mode of aspecting the subject, in opposition to the Direct or Observational. This truth is gaining recognition among our most advanced thinkers. Mr. Buckle, the author of the "Introduction to the History of Civilization in England," makes the assertion boldly that as yet we know nothing, for the reason that we do not comprehend the connection between the mental and material worlds, or between the external phenomena of the Universe and the Mind which observes them.

It is evident that a science claiming to be universal cannot properly ignore any domain, much less such an important department as Mind. Most striking among the first applications of Universology is the discovery, by its methods, of the fundamental laws which lie at the basis of all thinking and feeling-all mental operation-and the demonstration of the fact that they have a corresponding expression and action in the external Universe. The Mind, as a Microcosm, or Spiritual Universe, repeats, in an inverse and yet exact way, the Macrocosm or Material Universe; and hence each becomes a gauge by which to measure the
other. It is at this point that the Science takes on the distinctively Deductive character, as contrasted with the Inductive method heretofore in vogue among scientists. The Laws of Mind once radically discovered, we are enabled, by their aid, to correlate and harmonize the multifarious and complex phenomena of all external Being, as, by a knowledge of the laws of the earth's motion, we are capable of accounting for and systematizing the multifarious phenomena presented by the motions observable in the starry heavens.

The analogy between the discovery of the earth's motion and that of Universology is instructive in yet another particular. The earth's motion was a matter difficult of comprehension by those to whose attention the subject was first brought. In fact, it was sharply disputed, and upon quite plausible grounds, reasoning in accordance with all that was previously known on the subject. Any appeal to the ignorant classes, naturally predisposed to doubt, was useless, and the attempt to prove terrestrial revolution from drect observation would have been equally futile. The heavenly bodies apparently revolved daily about the earth ; and it is extremely difficult to establish the conviction that what we see with our own eyes is not absolute and undeniable truth. As the motion of the earth can never be perceived from direct observation, so Universology cannot be apprehended by an appeal to the observation of mere resemblances and differences as they appear concretely ombodied. It is only by attaining a perception of Law, in its most abstract and necessary aspect, that we can understand the modes of our own thinking; and then, by applying them to the external universe, prove the correspondence between the all-inclusive domains of Mind and Matter.

It should be observed that Emanuel Kant makes the same claim which is above expanded and applied to Universology. He, in other words, believed himself to have done substantially for the world of ideas what Copernicus did for the material world in establishing the change from the geocentric to the heliocentric mode of viewing the solar system. The illustration above was chosen as the simplest and most easily intelligible; but it is not intended to deny the claim of Kant. In the strictness of correspondence, and, subdivisionally, within the Subjective Domain merely, Kant's revolution in Philnsophy was, perhaps, more properly the analogue of the discovery of Copernicus; and the discoveries of Mr. Andrews are then similarly related to those of Kepler and Newton. They supply, in a word, that Exactification of Law and Unity of System which the mere change of the astronomical standing-point introduced by Copernicus, failed to establish. Charles Fourier also claimed to have repeated the great discovery of Newton in
respect, at least, to human societr, in his doctrine of Passional Attraction. The detailed examination and adjustment of such claims are not of importance to the present purpose, and may be safely left to the consideration of those who may make a specialty of the subject. The central peculiarity of Unirersology is undoubtedly the Exactification of Lau- - the substitution of the true Scientific character for this class of investigations, in the place of the rague speculations of Philosophy. In a certain concrete sense, Swedenborg has more completely reversed the order or direction of observation than any other thinker,-as expounded in this Basic Outline.

The essence of all Law is Relation, and the essence of Relation-in the largest and most comprehensive statement-is comprised in Likeness and Difference, or Unity and Variety. The likeness or difference subsisting between any two or more objects may be observed as a single fact; but, as attention is in such case directed mainly toward the objects, the perception of the Relation, as another order of fact, is not folly attained, because it is limited by, or confined to, the circumstances in which it is found. The idea of pure, abstract Relation-or Relation considered solely with reference to itself and its intrinsic nature-is something quite different. This can only be attained by disconnecting the Relation from the things related, and considering it separately as a subject of analytical investigation. An illustration of the idea here intended to be conveyed is found in contrasting two branches of the Mathemat-ics-Arithmetic and Algebra. In Arithmetic we deal with Number principally, although Relation is necessarily involved to a minor extent; but as our attention is mainly directed toward numbers, and the quantities represented by them, we do not attend, in our thought, to the Abstract relations existing among them. In Algebra, howerer, Number drops out of sight, and our task is, pre-eminently, with Relation. From a relatively concrete realm, peopled by ideal entities, we pass to an abstract one, where the subject of consideration is, not the entities themselves, but that which interrenes between them-the Betweenity of the things. This Betweenity, or Relation, is actually brought into such prominence in Algebra, and such consideration is bestowed upon it, that its characteristics are explored, analyzed, and named-and named in very simple yet expressive terms. Here for the first time in the history of Science the Law of Relations is formulized in any definite and exact way. In the,+- , and $=$ of Algebra we have the representatives of that Aspect of Universal Law applicable to the subject of this particular Science; and as we see that they suffice for all operations in this special department, we may infer, so soon as Unirersal Analogy is rendered probable, that this is but a single example of a

Universal Law, destined to be wrought out and formulized in all other domains. Such a Law does exist, and is discovered. The most abstract and inclusive statement of that law which can be made, echoing in exactitude to the plus, minus, and equation of Algebra, is found in the fundamental terminology of Universology-Unism, Duism, and Trinism.

The accumulated knowledges of the world, in Science, Philosophy, Religion and Art, will be the material upon which the incipient labors of Universologists will be expended; but even all this wealth, Inductively and Observationally obtained, will be but as a drop in that Ocean of Deductive and demonstrative knowledge which will become the possession of the human race upon the inauguration and prosecution of the legitimate methods of Universology. What has been already elaborated by the new method will furnish but a first step in an infinite progress of pure Deduction in all spheres and domains of human concern.
Universology, unlike all the Sciences extant, except Logic and the Mathematics, does not depend for its establishment upon grounds of probability. The tentative efforts of Science in all other departments, so far as they have aimed at establishing incontrovertible foundations, h we as yet produced nothing more than a high grade of probability. This arises from the fact that conclusions based upon partial and fragmentary observations-and all must be fragmentary and partial which do not embrace the entire Universe-must themselves be vitiated by incompleteness or non-inclusiveness; that is to say, any conclusion dependent upon observations of fleeting and changeful phenomena must ever be insufficient and unsatisfactory ; because we are unable to say that the further observations of to-morrow will not modify, enlarge, or subvert the conclusions of to-day. It is only when we deal with inherent and necessary Law, that we are able to arrive at conclusions which shall have the force of demonstrable and irrefragable deduction, the very "thus saith the Lord" of absolute and exact science.

A most important consequence flows from this radical difference between Universology and all fragmentary sciences. The student of Universology becomes thoroughly convinced of the absolute truth of the Science as soon as the fundamental statements of its formulæ can be made intelligible to his mind. He is, as it were, made instantly aware of the truth-and the whole truth, in a certain sense-in respect to the subject, instead of being compelled to wander for years through the mazes of a science whose dicta must necessarily change with every new discovery of a fact.

Perhaps one of the happiest illustrations as showing the radical dif-
ference between Universology and the Partial Sciences will be found in the contrast between the special senses of Touch and Sight, including the modes and spheres of their operation. The knowledges now accumulated in the world have been obtained by a mental process resembling that in which a blind man procures his information of the world. He must come in contact with every object of investigation, and, after carefully feeling it, examining its shape, quality, size, etc., he notes these characteristics, and proceeds, with patient and plodding step, to the consideration and examination of the next object. Accumulation of facts, and description and classification of natural objects and processes, constitute in the main the knowledge alike of the blind man and of the scientific world up to the present hour. The scientist is a veritable Gradgrind, and is not disposed to listen to theories or speculation unless based upon precedent or consequent facts. The power of comparison between objects and processes, in its clear, full, and normal operation, is reserved, however, for another faculty; namely, the organ of Sight (mental as well as physical). To the eye of the blind man suddenly gifted with vision, the most prominent and striking fact would not be the objects in creation-with which he has become partially acquainted by laborious and patient investigation through the limited sense of Touch-but the grand, wonderful, and illimitable expanse of light in which all things "live, move, and have their being." He is gifted, for the first time, with the perception of a new medium of Relation between things; it becomes a fact of direct vision with him that all the objects with which he had come in contact have a common matrix of light; and so, by the acquisition of the faculty of Sight, he is put in possession of a means of obtaining knowledge quite different in scope and nature from what was his while able only to feel. Those mental faculties corresponding to the special sense of Touch act in a manner correspondingly slow, toiling through endless turnings and windings towards the acquisition of a full rational conception; whereas, with the awakening of the mental power of Vision comes the instantaneous rectilinear perception and conviction of the exact aspect of Truth, addressed directly to that faculty of the Mind in such a manner that no further questioning or examination is necessary.

Again, the domain of Universology holds a position relative to the domains of the Partial Sciences, analogous to that which the domain of Sight holds in its relation to those of the other special senses. It is not to be compared with the others as one of a similar series, or as occupying a grade a little higher or covering an expanse a little greater than that of any other science. It is a domain which is all-inclusive,
all-embracing, and all-pervading, as the sunlight-the domain of Sight -includes, embraces, and pervades all objects of special sense in the material world.
The basis of Universology is not in the accumulation and digestion of phenomena or facts in themselves, but is to be found in the Law of Comparison between them. It will be readıly inferred, then, that for the establishment and demonstration of the Science, only the smallest possible modicum of fact is necessary; as the exhaustive analysis of the relations between any two objects, two facts, or two phenomena will be the statement of the whole Science in its fundamental, abstract, and first-applied aspect. As, in Algebra, $x$ might represent a known or an unknown quantity, and the whole solution take place with equal exactitude and precision; so, under the application of Universological law, all questions are resolvable with equal facility whether they relate to the more obvious and external domains of Matter, or to the abstract and less appreciable realms of pure Philosophy and Metaphysics.

The Mind is the great Spiritual Sun. The Laws of the Mind are the universal Sunlight which illumines all things, and makes them clear. Analogical with the material Sun, the radiations from this Spiritual Centre are cast upon all things in the Universe, bathing them in a glory, a beauty, a claritude so much greater than those of the external Sun as the Spiritual is higher in rank than the Material. Nothing can be truly known except as the light of this ineffably brilliant orb is shed upon it; and all things knowable in the Universe partake of the nature of the Mind which knows, in like manner, as all things visible in the material Universe are penetrated and permeated with the principle of external light. It is in these subjective Laws of the Mind, then, that we are to seek the ultimate explanation of all phenomena external to it, as in the reflex fact of the earth's motion was found the solution of the complex astronomical phenomena which before perplexed and deceived us.

A thousand illustrations of the application of Universological Law might be made, and will be made under the proper circumstances. This is not the occasion for an exhaustive analysis of the subject. The effort has been rather to indicate what the Science is-to talk about it -than to teach its principles in any exact manner. That labor is remitted to the text-books and lecture-rooms of the University. The Laws of the Universe in detail of manifestation are too numerous to be caught and imprisoned in any single formula of expression, whether of Language or of Art. Absolutely simple in their origin, yet infilling all forms of Being, outworking through all modes and structures, pronouncing themselves in all Existence, from the minutest atom to the
grandest world, they demand an Infinity of Space and an Eternity of Time for their full and sufficient display. True, owing to the primitive simplicity, we find in each and every form, mode, and molecule in the Universe the same, identical, regulating Principle, and all we need is the mental tactus eruditus to be able to detect its presence and simple grandeur amid the myriad variant forms through which it speaks; yet the vastness of their variety, in evolution, precludes the possibility of any adequate simple treatment of the subject.

It is proper to notice here one of the more immediate and important results of the application of the Science; namely, the discovery of a Scientifically constructed Universal Language. The necessity for such a language, as one of the exigencies of the Science, is patent, as, without a Universal Language, Universal Science would be destitute of its proper or adequate Terminology. I can do no better at present, to illustrate this very interesting branch of the subject, than to quote a single passage from an unpublished work introductory to the New Universal Language. I conform, in the extract given below, to the typographical dress which is one of the peculiarities of the style in which Mr. Andrews chooses to convey his ideas; and I refer the reader, for the justification of his method, for his purposes, to the Commentary beginning upon the second page of the body of this work (Text3), where the subject is fully discussed.
"The Lingual Alphabet contains the Vowels and Diphthongs, Consonants and Ambigu's which enter into the construction of the Universal Language, together with the Meaning with which each Sound of the Human Voice is discovered, by the most fundamental Analysis, to be intrinsically and inherently loaded by Nature herself. These few Meanings of the Alphabetic Sounds of the Voice are discovered to be tie Primary Elements of All Possible Thovart, and, at the same time, to correspond with or exactly to repeat the Primary Elements of All Posstble Being and all Possible Movement in Nature hersflf; so that this mere handful of Meanings constitutes, in turn, 1. the Ideological Alphabet, or Alphabet of Ideas; and, 2. (by correspondence) the Ontological and Logical Alpiabets (or the Alphabets of Realities and Laws) in the Universe at large. In other words, the Alphabet of the New Language is, in a sense, the Alphabet of Universology, and, in fine, the Alphabet of the Elementary Constituents of the Universe itself.
"It results from these Discoveries that, by the Combinations of these few Letters (or Sounds) into Words-the Process of Word-buildingthe precisely correspondiny combinations of the Primitive Elements of Thought into Simple and Compound Thoughts are ropresented; and
also the Corresponding Combinations of the Primary Realities and Principles or Laius of Being, into Concrete Objects and Movements, and Systems of Objects and Movements, in the External World. The Words so compounded of Elementary Sounds are then, by a necessary consequence, loaded with the precise amount of Meaning contained in the Thoughts compounded of the particular Elements of Thought represented by the Sounds-the corresponding Elements of Speech. These compound Words and Thoughts correspond, again, in turn, with Things and Operations and Systems in Nature, compounded in like manner of Primary Realities or Elements of Reality (Proto-Pragmata) and of First Principles and Laws,--the Elements of Being. The System of Normal Human Speech, the System of Thoughts in the Mind, and the System of Things and Operations in the World at large, are found to be naturally evolved from the same starting-points, in divergent radii of development ; furnishing a panorama of the Universe seen in the structure of Language.
"The understanding of the Law of this Development pertains to the newly discovered and immense Science of Universology."

These abstruse statements of the incipient aspects of the subject must doubtless seem somewhat vague and inconclusive to the apprehension of the reader; and no proper appreciation of the tremendous consequences flowing from such a discovery will, at once, arise in the mind. But consider what must be its results! We have placed in our hands, for the first time, the Law in all domans and spheres of the mental and material Universe. And what does this involve? Instead of groping our way in darkness in the investigation of the phenomena of the Universe, we have a true and sure gulde to point the way and lead to the realization of our highest aspirations. In the Scientific World, all investigation, instead of being carriced on sporadically and in an isolated manner as hitherto will be conducted upon a certain, well-defined, and unitary plan, in accordance with which the whole Scientific World will act with one purpose, having a common chart by which to be guided and governed. In the industrial activities of the Race, the same unity and concord of action will be achieved, whereby the whole Earth will be beautified and rendered habitable by the labor of a Collective Humanity directed by a kne vledge of Universal Laws; men not, as now, conflicting with and ne, tralizing each other's efforts by the chaotic multiplicity of the antagonistic plans and objects which they pursue. In the Social World, a common law of Societary relations will bring into harmony the contending interests of communities and nations, who will render obedience to it with the same promptness and alacrity with which they now observe
laws discovered and applied in minor spheres, as, for instance, locomotion and the transmission of intelligence. The great international questions which agitate the world will be discussed in the light of universal principles, and will be decided by the fiat of an exact science, from which there will be no desire to appeal. In the Religious Sphere, the solution of those knotty problems which have heretofore vexed the souls of men will be rendered clear as the sun at noon-day; and all contention, strife, and misunderstanding on theological, moral, and ethical questions will be forever dissipated by a scientific knowledge of the Law, and, so to speak, of the Aim and Plan of the Creation, superadded to all that the religious and prophetic intuition, inspired or uninspired, has revealed in the past.

And this is not all. The Great Science will not only furnish the underlying rule of conduct in all these separate domains; it will also supply the Law of their inter-relations; -so that order and regularity will be introduced not only into each special domain by itself; but a great compound, universal harmony will be evolved by the combination and co-operation of them all in one grand whole. In a word, the same law will be universal in its application; and what will be true of the parts will be true of the whole. Thus the student in any particular department will be obtaining a knowledge, not merely of his specialty, but of the law of all specialties, and also of their combination in one compound aggregate. The physical, mental, moral, and spiritual relations of men will be placed upon a clear, well-defined, eternal foundation of truth and justice; and all that is noble, refined, and beautiful in the innate constitution of man will have free scope to develop under the influences, tendencies, and aspirations which God has implanted in his being. To include all in one word, we shall know in an absolute sense what is right and true and good, instead of supposing and opining, as now.
M. A. Clancy.

## II.

## Paper by Nr. Freeland-(Nay, 1866).

Having been requested to furnish for publication a statement of the character, and of my estimate of the value of the New Scientific Labors whose First or Fundamental Principles are herein exhibited by the Discoverer, I offer, as most appropriate for the purpose in view, the following brief and cursory notice issued by myself in the form of a Circular Letter in May, 1862, as the original public announcement of this most important Discovery.

New Yorr, May 1st, 1863.
A new Scientific Discovery, of immense scope and importance, has recently been completed in New York City.

The Science is of such magnitude and character that the discoverer feels justified in bestowing upon it the mame of Universology, or the Science of the Universe. It is the Science of the Universe, as a whole, and of the correlation of its parts and principles, in the same precise sense as that in which Geometry is the Science of the admeasurement of extension and form, or Astronomy of the relations of the heavenly bodies. It is the discovery and complete elucidation of those backlying and universal Principles, in the nature of things, which are everywhere suspected, as it were, to exist, but which have never been heretofore Scientifically discovered and proven ; Principles which have given rise to dreamy, misty theories of Universal Analogy, precisely because, on the one hand, they are essentially true and universal, and are therefore constantly recurring to all observers; and because, on the other hand, they remained still undiscovered, or latent, so to speak, relatively to the human mind. These Principles are brought out, by this Discovery, into their plenitude and exactness, in the strictest sense of these terms.
In other words, the discovery is that of a Science, or rather the Science of Universal Analogy; not in that vague way in which such an idea has been dogmatized, out of the intuition, by Oken, Fourier, Swedenborg, for example; but as a veritable Scientific Discovery of a new exact Science, and the greatest immeasurably of all the Sciences. It is the Science of Universal Principles, and distributes, not only all the Sciences, and consequently all the Departments of Being among themselves, but enters directly into the body of each special Science, and distributes all the particulars within every Domain.

It is, therefore, in one sense, the one and only Science, of which all other Sciences, whether physical or mental, are only twigs or branches; but, in another sense, it is only the central Science, from which all the special Sciences are, in the nature of things, derived, and to which they must of necessity relate and adjust themselves, in order to their own perfection. In still another sense, or in addition to all this, it is the introduction of a now Scientific Method and Epoch; the furnishing of a genuine and legitimate method of Deduction, as a guide for all future scientific investigations, in all Departments whatsoever; not, however, to the disparagement or exclusion of observation and the continued induction of minor laws.

Auguste Comte has thought it necessary to guard himself from the imputation of so risionary a belief as that of the possible discovery of
a Unitary Law in Science, to which all the phenomena of the Universe can be ultimately referred. He nevertheless says: "The ultimate perfection of the Positive [or Exact Scientific] System would be (if such perfection could be hoped for) to represent all phenomena as particular' aspects of a single general fact;-such as Gravitation, for instance." The value of the tendency towards Unity is also expressed in the following sentence: "Howerer impossible may be the aim to reduce the phenomena of the respective Sciences to a single law, supreme in each, this should be the aim of philosophers, as it is only the imperfection of our linowledge which prevents its accomplishment. The perfection of a Science is in exact proportion to its approach to this consummation."

Agassiz, in his notice of Oken's System of the Classification of the Animal Kingdom, judiciously observes (quoting from memory), "we do not yet sufficiently understand the Law of Analogy to make it the basis of our distributions." There is.here an implication that such a Law exists and is awaiting discovery. The idea is confirmed by the following remark, taken from the article of the same distinguished Scientist in the late February number of the Atlantic Monthly: "The time has come when Scientific truth must cease to be the property of the few, when it must be woven into the common life of the world; for we have reached the point where the results of Science touch the very problem of existence, and all men listen for the solving of that mystery. When it will come, and how, none can say; but this much, at least, is certain, that all our researches are leading up to that question, and mankind will never rest till it is answered."

Prof. Peirce, of Cambridge, in his Suggestions of Analogy in reference to the arrangement of the leares of a plant on its axis, of the spines of a shell, and of the planets around the sun, seems to be feeling out in the direction of the discovery of such a Unitary Law.

Precisely this Law, which Auguste Comte deems it visionary to believe in the possibility of discovering, which Prof. Agassiz seems confidently to expect will be discovered at no distant day, and the existence of which is strikingly confirmed by the observations of Prof. Peirce, is now matter of actual discovery, as capable of demonstration as any problem of Geometry. It will supply to the Naturalist, completely and with perfect certainty and beauty, those Laws of Classification towards the attainment of which modern scientific labors have been directed; while it will clearly, unerringly, and satisfactorily solve that " mystery," "for the solving" of which "all men listen." It will demonstrate to the Mathematician the identity of the Laws which pervade his own sphere with those which pervade every other department
of the Universe, and exhibit to him the nature of that Law in accordance with which all the phenomena of the Universe are distributed.
The Science of Universology is based, then, upon the discovery of the Law of Analogy, which, while it unifies all knowledge, also points out and demonstrates the particular place of each fact in the broad Generalization, and the relation it bears to all other facts, considered either separately or as a whole. More exactly, while the Science commences in the broadest and most inclusive observational Generalizations, it proceeds from these downwards to the most complete and fundamental analysis. By this analysis, it discovers and establishes the equally broad and universal abstract Generalizations which furnish the Unitary Law and its primitive branches. From this analysis it again proceeds upwards to the scientific synthesis of the Universe, supplying the most complete and detailed classification of the particulars, in each Department of Being, carrying Scientific precision into the minutest details of all the Sciences, and is capable of giving the rationale even of the shape of shells on the sea-shore and of the colors of the autumn forest.

It is, therefore, the Science of the Laws of Order and Harmony as they exist in the Universe at large, in consonance with which all human affairs must be conducted in order to secure true and practical concord and the most perfect results. Commencing in the Mathematics, and ascending gradually through the whole range of the Sciences to the topmost ones-Sociology and Theology-it shows the Principles at the base of each of these seemingly different Sciences to be the same, and demonstrates, with the clearness and exactitude of Geometry, the identity of all the Laws pervading each of them. Universology is therefore the complete Scientific demonstration of that Universal Unity of Plan in the Universe which Fourier vaguely theorized and confusedly attempted to explain. The multitude of the Sciences are to it what the distinct parts of the body-head, arms, legs, fingers, toes, etc.-are to the body as a Unit or Whole. It is a Science linking together, and including within itself, all the Sciences now known, and numerous others which will be unfolded by it. It may be viewed, therefore, both as a grand, all-inclusive Science, and as a new and comprehensive Scientific Method.

Still another aspeet may be presented of the subject. Agassiz, in the article already quoted from, says: "Yet believing, as I do, that classification, rightly understood, means simply the creative plan of Good as expressed in organic forms," ctc.; and again: "If, then, the results of Science are of such general interest for the human race; if they are gradually interpreting the purposes of the Deity in creation and the
relation of man to all the past,--then it is well that all should share in its teachings," etc.
Looking at Universology from the same point of view in which this celebrated Naturalist here regards Classification, we may aunounce it as the complete discovery and perfect interpretation of "the purposes of the Deity in creation," and the entire unfolding of "t the creative plan of God," not only as expressed in "organic forms," but as involved in erery Sphere of Thought and Being in the Universe of Matter and of Mind. To state this in another way: Certain Fundamental Laws are found to exist in accordance with which the Phenomena of every Department of the Unirerse are evolved. In the Domain of Mathematics, they take the form which the nature of that Science demands; in that of Astronomy, they are wrought out in conformity with the conditions imposed upon them by the nature of the material in which they are expressed; somewhat in the same manner as the same architectural plan is modified, according as it appears in wood, in brick, in iron, or in stone. In Chemistry, in the Mineral, the Vegetable, the Animal Kingdoms, in the Science of Mind, and elsewhere, Universally, these same Fundamental Laws re-appear like an echo, modified, in their manifestation merely, by the nature of each individual case, but constituting, when rerealed by the discovery of their identity, the basis of the new Science of Uaitersolog.
Such a discorery, inrolring, as it must, events the most important, calls more loudly upon the attention of the Scientific Man, the Thinker, and the Practical Man, interested in the Progress of the Human Race, than any other. Throngh the portals of this Science we are about entering upon the most tremendous revolution in Science, in Government, in Theology, in Political Economy, in Art, in Practical Life, which the world has ever witnessed. Such a movement will require the co-operative labors of all Scientific men in the future, to trace out in their several Departments the particular operations of Laws which, in their generality, will be, from an early day, the common intellectual wealth of all intelligent minds; and the aggregate labors of practical men, in all spheres, to apply these Laws, thus developed, to the rarious constructions and activities of every-day life.

In Prof. Whewell's "History of the Inductive Sciences," in discussing the philosophical speculations of Pythagoras concerning numbers (Vol. I. p. 78, Am. Ed.), occurs the following statement, which gires a glimpse, almost the only one found anywhere in the books, of the actual method of investigation which has led to the accomplishment of this great discorery: "It has been obserred by a distinguished modern scholar (Thirlwall's Hist. Gr. II. 142) that the place which

Pythagoras ascribed to his numbers is intelligible only by supposing that he confounded, first, a Numerical Unit with a Geometrical Point, and, then, this with a Material Atom."
"The Pythagorean love of Numerical Speculations might have been combined with the doctrine of Atoms, and the combination might have led to results well worth notice. But, so far as we are aware, no such combination was attempted in the ancient schools of Philosophy, and perhaps we, of the present day, are only just beginning to perceive, through the disclosures of Chemistry and Crystallography, the importance of such a line of inquiry."

The discoverer of Universology is Mr. S. P. Andrews, a Member of the American Academy of Arts and Sciences, the American Ethnological Society, etc.; Author of Discoveries in Chinese, etc. A somewhat inaccurate list of his works, heretofore published, will be found in Allibone's Dictionary of Authors, and in Trübner's Bibliographical Guide to American Literature.

Somewhat more than two (now six) years ago my attention was, called to the fact that such a discovery was being made, and I was invited to a critical examination of its Principles. A thorough inrestigation of the subject fully confirmed in my mind the claims of the discoverer. During the two (now six) years past I have been engaged in, and wholly devoted to, collaboration in the development of the Science, with Mr. Andrews and a small number of investigators, whom his discovery has gathered about him, as assistants, and who constitute already the nucleus of a working University in the establishment of the Science and its application to the various Branches of the Scientific Domain. I have now taken upon myself the labor of preparing this incipient statement of the subject, for the purpose of bringing it before the attention of leading minds in the Scientific, Religious, and Practical Spheres.

Cuvier, in speaking of the Progress of the Sciences, makes use (translating freely) of the following expressions: "We have seen them [the Sciences] if not positively acting as the creators of human society, at least being developed along with it, and conferring upon it successively all its increased enjoyments, sometimes even revolutionizing completely their elements or the methods of their realization; so that, from what the Sciences have done hitherto, it is not difficult to foretell, in some measure, what they must be destined to accomplish in the future."

There is, then, sufficient basis for a general interest, on the part of all persons, in the early amnouncement and popular introduction of any great Scientific Discovery. The present Circular Letter is designed, how-
erer, for such persons only as are supposed, from their public reputation or from personal knowledge of them, to have a more than usual interest in all that concerns the progress and well-being of the Race, intellectually, materially, or morally.

Should any persons, to whom this Circular Letter may come, find the statements contained in it interesting to such a degree that further information is desired on the subject, such individuals are requested to communicate with me to that effect, and I will, from time to time, keep them advised of the progress of its development and publication; and will, so far as practicable, afford them facilities for ascertaining how, and in what degree, the discovery may subserve their intellectual or practical wants, and how they, in turn, may aid in its rapid diffusion and enlarged usefulness in the world. (1)

Edward B. Freeland.

## III.

## Paper by Mr. Hoyle.

In order to estimate and rightly to describe the new Science of Universology, an amount and variety of information would be required (in addition to a comprehensive knowledge of the Science itself, as such), of which few, indeed, even among the learned, are possessed. To render but scant justice to a theme so vast, with all the advantages which a familiarity with extant knowledges and a ready facility of expression could afford, it would be necessary to devote years instead of hours, and volumes rather than pages, to its elucidation.

With this prefatory disclaimer of any attempt to exemplify, except proximately and most imperfectly, the scope and excellence of the Science, it will be the purpose of this paper briefly to advert to some of its more salient points and prevailing characteristics; and, by a presentation of the results which must supervene on its application in certain departments of human activity, to induce earnest inquiry concerning a discovery so long vaguely anticipated, and so immensely important in its bearing on the destiny of the Race.
Based on Principles erolved from an analysis, more subtle and thorough than any heretofore instituted, into the constituent Elements of Thought and of Things, as they interpenetrate all Domains of Being whatsoever; establishing a relation between spheres of investigation hitherto deemed radically distinct, and introducing a Unified Sys-

[^0]tem of Knowledge,-this Science sweeps from realm to realm of the material and spiritual Universe, unlocking the secrets and classifying the phenomena of each, with a certainty and exactness limited only by the capacity of the philosophic explorer to apply its principles and interpret its indications.

In the Department of Language these principles furnish the necessary data for the elaboration of an entirely new form of speech based on the inherent meaning of Sounds. This language will be concise, regular, and euphonious. It will possess a canacity for expression infinitely minute, and as infinitely varied as the impressions, whether mental or objective, which the human mind is capable of receiving. Its acquisition includes and-from the Scientific Analogy which links each domain of Being with the rest-even necessitates the simultaneous and easy acquisition of the Laws, Classification, and Details of all other spheres. Whilst in a sense complete in itself, it will be eminently adaptive to existent methods of Speech, and thus capable of acting mediatorially during the process of its general diffusion in the world, by the gradual fusion of all existing languages into each other. Its excellences are so apparent on examination, that it must eventually be adopted as the vehicle of, at least, all technical and scientific intercourse, if indeed it be not finally received as the Grand Universal Vernacular of the World.

Tracing the application of this Basic Science in another Domain, we find it disclosing a system of Ordinal Mathematics as magnificent as its Cardinal Counterpart, but hitherto unthought of. It promises to remodel and vastly to simplify both the System of Numeration and of Calculation. It inaugurates a new and immensely exact and extensive Science of Morphology. In its Language, just adverted to, it provides a Technical and inter-related Vocabulary for all known, and many as yet popularly unrecognized, departments of human research. In the political sphere it demonstrates what are the Principles of a True Form of Government, under whose Fgis the liberties of the people will be perfectly conserved, while they will gladly render unbounded allegiance to their Chief or Chiefs. Within the domains of Social Economy, Ethics, and Theology, it will educe an Integral System of Order, Morality, and Religious Doctrine which in the Past has been instinctively felt after, but which, prior to the discovery of the Grand Elementary Principles of Universology, could never be attained,-a System as conservative of the underlying Spirit of all the Sanctities of the Past, as it is startling and far-reaching in new Scientific Revelations allied to the Present and the Future. It is, in short, potent in all realms. The Priest, the Scientist, the Statesman, and the Idealist of
the Future, must all be cognizant of its axioms; for, with the same readiness, it interprets Prophecy and unveils the mysteries of Nature, of Government, and of Art.
First discovering and then demonstrating the Paradoxical Nature or Essential Oppositeness of basic Truth in its origins, Uviversology accepts as equally true, in an absolute sense, Principles of dirergent tendency; inclusive, in the ultimate of this acceptance, of statements whose relations are directly antithetical or polar. In other words, it admits and proves the Rightness of fundamental Positivisms, or affirmative statements, even where they are diametrically opposed. It is the prorince of the New Philosophy of Integralism scientifically to adjust the relationship of these fractional truths; and, from components differing, in all degrees from mere divergence of drift to perfect antithesis, to elaborate the Grand Composite Truth, which, while it both includes and rests upon all the others, alone possesses the attribute of Wholeness, (or Holiness), which results from the perfect symmetrical adjustment and inter-dependence of the parts in their relations to all the rest. As there must be two antipodal points in the shortest straight line; as it requires two opposed radii to form a diameter, or two differing hemispheres in the formation of a globe, and so ad infinitum,-so it is found that a simple truth or principle requires to be counterparted by its opposite for the evolvement of a Higher Truth and a more comprehensive Unity. This discovery alone is of immense value; and, conjoined with a thousand others of similar importance resulting from Universological Bases, marks an epoch in the development of the intellectual and spiritual faculties of the race, which will remain as a crisisevent or notable way-mark in the path of Progress throughout all time.

With the Evolution of this Science is inaugurated, if I mistake not, a new era in the history of the world, and one transcending, in the importance of its results, any by which it has been preceded. It possesses potency sufficient, under enlightened direction, peacefully and beneficently to revolutionize the world in all its domains, whether Ideal, Physical, Social, Moral, Political, or Religious; and the results of its application, in the solution of Problems within these departments of Being, will exceed those heretofore attained by blind effort merely, in proportion to the power of achievement which methods of Scientific Exactitude possess over the incertitude and failure of perpetual guessing and believing. It is, in fine, the Sublime Expounder of the Universe of God; and the means of the eventual introduction of the Race to a Paradisaic Existence whose pleasures will transcend the highest imaginings of so-called Utopian dreamers.

Datid Hoyle.

## IV.

## Paper by Mr. Nevins.

The Infinite Spirit that made all things has left it to the same Spirit incarnated in Man to solve all intricacies of Life and Destiny, with such Revelations from time to time as are adapted to his mental and spiritual conditions in aid of his own inherent intellectual powers. The final Atonement (at-one-ment) or Reconciliation of God and Man must therefore be by means of the thorough accordance of Revelation and Reason; the one addressed principally to those automatic or unconscious powers of the Mind, which, like the involuntary forces of the Body, predominate in the infancy of the Race; the other, the product of the determined use of the Consciousness and Will, externally observant or else "self-searching with an introverted eye," discovering their own capacities, and re-directing them upon the outward Creation, -or Nature, which will ultimately be plastic to the thought and work of a completed Humanity.

The great and good minds of all Time have accepted, with more or less clearness of perception, this Problem of the ages, aptly symbolized in the Fable of the Sphynx, and have devoted their lives to aid in its solution. To their noble endeavors we owe what most illustrates the History of the Past, that vast accumulation of Philosophic Speculation, Scientific Knowledge, and Practical Example, which, especially since the invention of the printing-press, has become a permanent and indestructible Treasury of Thought. Nothing now but the destruction of the planet by some convulsion of Nature can seemingly prevent this ultimate consummation.

In this nineteenth century wonderful events of essential significance to the philosophic observer are realizing the prophetic hopes of the Past, as if the dream of the ages were about to be fulfilled, and Astrea to return to the home from which she was driven by the vices, folly, and strife of men.

But hitherto this improvement has been almost wholly fortuitous, without organization or method, with only so much of definite purpose as proceeds from individual inspiration or sectarian interests.

The two great potencies of Progress-Science and the Church-have been at war with each other, the one devoting itself wholly to the material, and the other almost entirely to the supposed spiritual interests of Man ; neither suspecting, apparently, that these are identical, eren as Body and Spirit are one, and that they cannot be divided with impunity to either.

It must appear to all who think, that the time has arrived when this opposition should cease; and that these two Representative Powers of the Race, in the exercise of their two highest attributes, Charity and Largeness of Thought, should combine for the furtherance of the great object-the well-being of Humanity-which both claim to have in view.

But only by means of a Science which demonstrates the Truths of Religion, and of a Religion which accepts the demonstrations of Science, can the whole thought and purpose of all earnest and sincere men be concentrated into such a focal determination as will install a new and progressive era. Universology, or the Science of the Correspondential or Analogical Relations of Mind and Matter, claims, and, as it seems to the writer of this, with justice, to accomplish this latest, greatest work of human thought. This then is that Universal Science or Prima Philosophia, the discovery of which is the turning-point in the History of Destiny, as predicted and foreshadowed by Poetry and Prophecy-that Science which the boldest reasoners of the Past have seen to be a necessity of the Future ; of which the greatest minds of the Greeks felt and saw the possibility; the idea of which inspired the two Bacons; a glimmer of whose distant lustre illumined the great perceptive powers of Newton, and the dawn of which the best Scientific Thinkers of the present age have perceived.

Man lives in two Worlds, - a world of outward perception, and another of inward apprehension; and these two reflect each other, as in a drop of rain, falling through the atmosphere, is mirrored all surrounding space. It is this mystic relation between the Soul of Man and visible Nature which has furnished the symbolism of all Mythologies, and the materials of Poetry,-Man worshipping his Ideal Self in the images reflected upon the retina. "The eye sees what the eye brings means of seeing," says Carlyle. Not in nature, but in the thought of Man, is all the Beauty; and Matter is but a lifeless mass except as it illustrates the passions, powers, and purposes of the Human Spirit. Wordsworth has, in the following lines, expressed with great beauty this doubleness of meaning in Nature:

> Yes, it was the Mountain Echo, Solitary, clear, profound, Answering to the shouting Cuckoo, Giving to her sound for sound!

> Unsolicited reply To a babbling wanderer sent; Like her ordinary cry, Like-but oh, how different !

Hears not also mortal Life?
Hear not we, unthinking creatures;
Slaves of Folly, Love, or Strife,
Voices of two different Natures?

Have not we two? yes, we have Answers and we know not whence ; Echoes from beyond the grave, Recognized intelligence!

Often as thy inward ear Catches such rebounds, beware,Listen, ponder, hold them dear; For of God,-of God they are! (1)

This thought, so familiar to Poetry, has always been jealously looked upon by Science, though every profane thinker, whether Philosopher, Poet, or Scientific Theorist, has felt that by means of this mysterions Analogy, this promoter of Association and wakener of Memory, all his greatest thoughts were obtained ; that in this region of mental perception lies that reconciliation of the Real and the Ideal, which to the man of genius or keen sensibilities is the only refuge from the painful necessities of transient existence. "Mnemosyne," says the ancient Fable, "is the Mother of the Muses, but Jupiter is the Father."

To the determined patience, careful research, and indomitable perseverance of the author of this volume we owe it that this dream of the Poet is turned into a positive and scientific reality, as Puck's boasted girdle of the Earth has been substantiated in the Magnetic Telegraph, and as the Afrite of the Arabian Tales has been outdone by the modern Locomotive. The wildest fancies may now furnish the careful scientific thinker the basis of undoubted deduction ; and intuition and intellection, imagination and reason, suggestion and ratiocination, Religion and Science, like the different parts in Music, join together in producing on Earth the Harmony of the Spheres.

The Human Soul in all ages has aspired to a Heaven which, in view of the intolerable discrepancies of life upon this Planet, has been referred to a Future Existence. But it has never been denied that all the materials of a Heaven exist upon this Earth, and such a Heaven is positively promised in Revelation. That the realization of this promise is to be brought about by the exertion of man's rational faculties, can hardly, it seems to me, be doubted; the whole aim of Inspiration hav-
ing been symbolically to suggest, rather than scientifically to teach. A Universal Philosophy, and its absolute application in a Positive Science, whose demonstrations shall be beyond the reach of question, must be the preliminary theoretical step. The tools must first be furnished with which the work is to be done. Such is Universology, the Science of the Whole Universe, or the Positive and Rational Revelation of the Organic Laws of Thought and Being by means of their Correspondence, or of the Grand Pervading Analogies between them.

To minds of a certain class-familiar with, and up to the thought of the age-accustomed to large generalizations, and to what is called in Law, "Circumstantial Evidence," or what may be indicated under the name of Dramatic Probability, called by Edgar A. Poe "Consistency," that accordance with Truth which no Art can imitate,-the general scope and tenor of this Book will be its own justification and proof; and I predict, they will find in it, as I have done, the means of explaining the heretofore inexplicable, and of reducing mental chaos to orderly arrangement, and also a method of concentrating their faculties in any desired direction, which they have never before possessed. It is the first attempt, within my reading, at a Mathematics of Metaphysics, and at the reduction of the great Mystery of the Trinity, the Attribute of the Godhead, and the Law by which His Personality is expressed in Nature, to (as far as that is possible as mere Science) a simple Arithmetical Problem. To those who will accept nothing but as it is logically proven, this Book offers a chain of the most cautious reasonings, and, after establishing a new and infallible method of deduction, piles proof upon proof, and adduces analogy upon analogy, all governed by the great Law of Trigrade Evolution, which is the foundation of the Science, and which is so accordant with the processes of reason and the suggestions of intuition, that the closest of such thinkers, however often he may demur to the statements of the author, will find that he does so, if he carefully examine his train of thought, by the same method of ratiocination supplied by the Science itself; the difference of conclusion arising mostly from a natural chariness to admit propositions so subversive of preconceived opinions.

The Plan of the Book, as a Work of Art, furnishes an admirable illustration of the application and use of the Science it is designed to teach,-a Science based upon the discorery of the Organic Triune Law of Creation, and the Grand Pervading Analogy of Providence. This Tripiicity of Nature will be found permeating all the thought of the Past, but only in modern times, and especially in this Volume, has it been directly applied to the uses of Science. One of the most perfect and obvious exhibitions in Nature of this Law is in the development
of the crust of the Earth, through the Primary, Secondary, and Tertiary stratifications. Comte saw it displaying itself in the laws of Mind as the Supernatural, the Metaphysical, and the Positive Stages of Mental Evolution; Luke Burke perceived the analogy in the parallel development of Geology and Mythology, and he classifies all myths into Primary, Secondary, and Tertiary. A modern chemist finds it in the properties of Matter, all reducible to Attraction, Repulsion, and Vitality; but by the founder of Universology only, is it first numerically defined under the name of Unism, Duism, and Trinism, and its absolute scientific value as a guide in every possible kind of investigation demonstrated and explained.

It is said that Pythagoras, on being asked who was the oldest of the Gods, replied, "Number;" and the wisest? the Author of Language, or the Namer of Things.

It is one of the wonders of Universology, that its profound generalizations and absolute analysis of all modes of thought furnish the key to every inspiration of the human mind. Upon this sublime and fundamental intellection of the ancient sage, the most notable of the Analogies of Existence, Universology erects the Science of Future Ages, and relieves Man from the confusion of ideas in which he has so long wandered. Spanning Primeval Thought, it shows the Law of Mental Evolution, repeating that of the Outward Creation in its progressive development, the Divine Intent, instant in every moment of Time, and every impulse of the Soul, evolving from the Chaos of Ideas a new Creation of Determinate Reason, and furnishing to Mind the means wherewith to subdue and finally to control its old enemy but future servant, Matter.

It has been perceived in Mystical Philosophy that in Language is the Key to the Mysteries of Nature. It was said among the Hermetics that he who had the right name of a thing conld call and control the Spirit of that thing. The Universal Language furnished by Universol-ogy,-Alwato,-discovered by means of the Analogies between the Elements of Sound and Sense, will furnish the right name of everything, and the knowledge of the right use of it. This was, perchance, virtually the Search of the Alchemists after the Philosopher's Stone, which was the dream and aspiration of so many great and good minds, -an " Open Sesame" of Science.
Language is, indeed, the expression of Thought; but beyond this it contains in the facts of its own structure the most definite exhibition we can have of the laws of that which inspires or creates it. "Matter," says the Poet, "is the Tongue of God;" and, in like manner, speech may be said to be the Echo of Consciousness. To define, establish,
explain, and render into a new practical form of lingual expression, incontrovertibly establishing it, this subtle relation between Sound and Thought, seems a labor almost beyond the reach of human endeavor. With an unequalled persistency and closeness of thought, combined with every other faculty of Man necessary to so great an effort, Mr. Andrews has worked out and solved this Problem, and the result is the establishment of the New Universal Science on the one hand, and the New Universal Language on the other. The Basic Outline of this immense achievement is given in the present work.

The Book is a Scientific Epic, and its effect upon the Future is immeasurable to present apprehension. Herein, as it were, the whole thought of the Past is brought to a Focal Point. All previous Religion, Poetry, and Science, have been converging towards this, as to a centre, whence, now, under the guidance of a definite Knowledge of Law, they may, with more direct purpose and prospect, renew their expansion and exertion in the great task of the regeneration of the Race.
J. West Nevins.

## V.

## Paper by Professor Boyle. (1)

"Washington, November, 1866.
"I was speaking, just now, of my inability to express myself satisfactorily; and that reminds me that when the Speaking and Writing Forms of the Universal Language developed by Universology shall obtain, it will be simply impossible for a man who understands them, not to be able to express any ideas he has the capacity to conceive or perceive ; and that it will be equally impossible for him to be misunderstood by persons familiar with this language who hear him, or who read what he has written, every idea and shade of an idea having its analogue in the domains, respectively, of sound and form. It does seem to me as if the discovery of a Universal Speaking and Writing
(1) This paper by Prof. Boyle was not, like those which have preceded it, prepared with any intention of introducing the Basic Outline of Universology. It is merely an extract which I take the liberty of making from a private letter, expressing, in the most confidential and spontaneous manner, the thoughts called forth by my own communication to him informing him that I had designed, and was engaged upon, an abridged presentation of the subject. I have thought, however, that it might not be uninteresting to the reader to be admitted to this unpremeditated and altogether private estimate of the labors in question.

The Author.

Language-the Writing Language at once ideographic and phoneticwill, of itself, be sufficient to convince those who examine it intelligently of the Oneness of Law. For they must see that the Metaphysics and Geometry of the true language,-its soul and its body, its basis and its superstructure, its source, purpose, and functions, even the forms of its letters, and the organs of the body which cause and modify its sounds,-are analogues-mere repetitions of one another; different phenomena truly, but, in one sense, identical-manifestations of the same Law-indeed, the same Spirit of the same Law, but with bodies adapted to their duties in their respective domains. The all-permeating nature of this language will necessarily attract even the most cautious and conservative explorers to follow it into one after another of the domains of thought, being, and action, to all of which they, the explorers, will then see that language is related as the domains themselves are related to each other. They will see, in short, that while studying language, they have been studying everything. Is not the idea magnificent?
"But, to change the subject. In what state of preparation is "The Basic Outline of Universology"? You gave me, some time ago, a brief synopsis of the plan of the book, and Mr. Clancy has since told me more about it. Judging from your descriptions of it, I should say it is just the thing we want. Mr. Clancy has read to me an introduction or preface prepared by himself-very abstruse, but not too much so, and, I think, remarkably intelligible for that kind of writing. Your book, I presume, will be very abstruse also, but none too much so for a first work. Universology Proper-I mean Universology considered as the Basic Science-must be started from the Centre, and must deal mainly with Abstractions. But I trust your book will be plain-intelligible of its kind. Do I make myself understood?-The bricklayer may be an indifferent expositor of his simple Art. His instructions to his apprentices may not be plain. He may teach them things out of their proper order. The architect, on the other hand, should present the fundamental principles of his science so plainly, each in its proper order, and in language and by illustration so intelligible, considering the nature of his subject, as to make even common minds understand the general principles of the science of architecture better than they were made to understand those of the vulgar art of masonry or bricklaying by imperfect teaching. It does not matter, I think, how abstruse your book may be, provided your statements be clear, your arrangements orderly, and your general method of presenting the entire subject attractive to the class of men whom you expect to have for readers.
"But, after all, I have little anxiety about your book. I am confident, -I know,-that it will be just the thing. It will be replete with suggestion, and, in that respect alone, will be invaluable. A thousand texts will be found in it from which to write lectures, sermons, essays, newspaper articles, etc., etc., and upon which to base thousands of other books. In one sense, the more abstract it may be, the better. The sooner it is published the better. I feel as if the world wants it at just this nick of time, and that it will, in the end, prove to be just the book that should have been written, even if it have, for the first year or two, only a dozen readers who fully appreciate it. I wait for it.

"Augustus F. Boyle."

I do not desire to be held responsible for the individual estimates which the preceding writers have placed upon the present work. They have each spoken freely as prompted by their convictions, and each is competent to sustain the responsibility for his own views. Still less have I desired, by calling on them, to forestall or aroid criticism. On the contrary, I should wish, in the interest of Scientific Truth, to evoke, and even, if it were necessary, to provoke, the critical judgment of others ; while jet it cannot fail to be seen that the work is, in a sense, reviewed before publication by these writers, who are, from the necessity of the case, and for the present, the only experts in the matter. The work, such as it is, while it has been presented by my coadjutors rather with reference to it as a cause of future effects, is itself, at the same time, an effect merely of the general development of the age-a natural outcome of the stage to which we have progressed in what may be denominated the scientific growth of the world.

I prize these contributions to the completeness of the work in respect especially to what is said, in several of the papers, of Alwato, the new Universal Scientific Language ; for of this there is, otherwise, more of promise than of performance. The explanation of this fact is this: the work, as originally planned, was subsequently found to be too extensive to be included in a single volume, and, in fine, a necessity arose for a division of it in the middle, into two distinct works,- the "Basic Outline," and the "Structural Outline,"-as if related to the foundation and to the main elevation, respectively, of an edifice. In this latter work the nature and possibility of the new Language will be expounded. It is in view of this slender treatment of the subject in the pages which follow that I have employed the feeble and somewhat indeterminate expression "Preliminary Notices of Alwato" upon the titlepage. As will be gathered from what is said in these papers, the new

Language is, in the strictness of the term, a discovery, and not, like the somewhat similar enterprises of Bishop Wilkins, Vidal, and others, an invention or mere contrivance. The idea is that there is a Language for the Race, as thoroughly provided by Nature, and which was as really to be discovered, as there was once a Music so existent and to be discovered. Our Music did not always exist as a thing scientifically known, although from the earliest times, doubtless, there was some instinctual development of the musical power, answering to the past instinctual development of languages in the world-prior to the true discorery of the creative lingual laws, or of the laws of true Art-creation in the domain of Language. The difference, here intimated, between discovery and invention is world-wide, and exceedingly important in this connection, but must not induce me into any effort at its development here.
The great importance of Language, and hence of Philology, as a sort of epitome of and index to all other knowledge, has been alluded to. It may then be matter of surprise that the Science of Language does not appear in the Typical Plan of the Universe (Table No. 7, t. 40, p. 23), nor in any of the more elaborate distributions of the present work. The reason is, that, inasmuch as Language is a medium of inter-communication between Man and Man in Society, and not between Man and the World itself, it is-notwithstanding its intrinsic and pivotal importance-no more, from a general point of view, thin a subdivision, and a somewhat minor subdivision, of Sociology, or the Science of Society. This will appear in fuller explanation elsowhere.

The occasion would be favorable, except for the want of space, to forecast somewhat in detail some of the practical applications of Unıversology, as they are anticipated, or known as it were in embryo in my own mind. I shall, however, confine myself to a single allusion upon this class of subjects: I refer to the prospective enlargement of our knowledge of the Laws of Health, Hygiene, and Cure, and to the perhaps indefinite prolongation of Life through the higher style of scientific investigations which the new Science will introduce. A few other references to the same subject will be found in the body of the work. The novelty and temerity of such speculations, from any scientific point of view,-notwithstanding they have always haunted the imaginations of men,-will or will not commend themselves to the attention of the reader, according to the organization and tendency of his own mind.

There is no fact in Physiology better settled than that the true analogue of Human Life is the Fire which burns upon our hearths, or the taper which lights the room. Many obserrations would have confirmed
the early observers in the belief of the proposition that a fire must "go out," or expire, after a certain length of time; but, by a better knowledge of the subject, we come to know that there is no such necessity; and the fact that fire has been preserved upon altars for hundreds, and perhaps for thousands of years, may be to some minds something more than a fact; it may be a suggestive symbolism as well.

If men should begin in this age, by a better understanding of the Science of Life, to live several hundred years instead of three score years and ten, would the fact be a greater surprise to the world, or a more direct contradiction of the accepted data of common life and of scientific theory, than the discovery of Photography,- the copying of our faces by the pencil of the Sun; the magnetic Telegraph; the annihilation of time in its relations to distance; or Spirit-manifestations, physical demonstrations evincing heretofore unsuspected spiritual forces, asserting themselves by intelligible signs to be our post-mortemsurviving fellow-creatures?

It is not the place here to argue so grave a question, and certainly nothing but a thorough study of the Principles expounded in this treatise could place the reader in a fitting condition of mind fully to understand the argument if it were made. It is equally certain that neither the idea of Immortality per se, nor that it is to be attained through some kind of unusual and strenuous effort, is new or offensive to the mental habits of the race. "Strait is the gate, and narrow is the way, that leads to life eternal, and few there be that find it." So also, there is not wanting abundant traditional and scriptural authority for the expectation that the ultimate Heaven, or divinized residence of Man Immortal, is to be, not some distant locality or attenuated spiritual state, but this Earth in some perfected or regenerated condition of the planet.

## Stephen Pearl Andrews.

New York, February, 1868.

## Supplementary by $\mathcal{M}$. A. C.

That portion of the foregoing Introduction which was furnished by myself was written prior to the completion of the following work in its present shape, and was the result rather of a pretty thorough course of investigation of the Science from personal communication with its discoverer than of any great familiarity with "The Basic Outline" as
such. After a careful perusal of the "Basic Outline" in its present form, I feel impelled to make one or two suggestions to the reaucir, and the privilege of doing so has been kindly accorded me by the author:
This work is so entirely unique in its character, and is constructed, in almost all respects, so differently from ordinary works of a philosophical or scientific nature, that some care is necessary on the part of the reader to guard himself against erroneous impressions. No proper estimate of it can be formed unless it be viewed as a whole, or, so to speak, conspectually. While nearly every part has an interest of its own, considered in and of itself, care should be taken that this interest do not hinder the perception of the main and important fact; namely, that it is the Unity of Principle found in, and furnishing the connection between, all the parts which it is absolutely essential to seize in order to a proper understanding of the Science, or rather of its fundamental character even. In other words, the characteristic and mainly valuable element of this work is its Connectivity; it being thus in harmony with its central postulate; for it purports to expound those underlying laws which run through and connect all departments of the Universe; and unless a coup d'ceil of the whole subject is attained, the time of the reader will be in a measure misapplied during its perusal.
Another point: The reader should not be discouraged or deterred from undertaking the mastery of the subject by the novelty of appearance, either in the book itself, or in its terminology. Its system of nomenclature is rery simple, and is easily mastered by reference to the Vocabulary, and especially to the Commentary on Text 43, pp. 26-28, where the nomenclature is fully explained. The justification, and even the necessity, for the peculiar and unusual style, both in composition and mechanical execution, will be found in the Commentary at various points, or will become obvions by increased familiarity with the subject. The work is artistically elaborated from this point of riew, and is, as I think of it, grandly elaborated, so much so that it is almost as impossible to judge of it in respect to its higher attributes by any fragment or extract, as it would be to judge of one of the masterpieces of a great artist by exhibiting a square foot of surface cut from his canvas.
M. A. Clancy.

## NOTICE TO THE READER.

Readers who may be desirous of arriving at a general understanding of the purposes and character of this work, but who lack the leisure or the application to engage with the severer portions of the subject, are recommended to omit, or to give only an incidental attention to, The Figured Nomenclature, or System of Numerical Clefs or Keys, contained in the Fourth Chapter, and which is calculated to give a rather forbidding impression. A more attractive substitute for this Technical Machinery will be furnished in subsequent works, in the structure of the Alwatoso terms themselves, by which the Several Sciences will be named, and their Relations to each other indicated (t. 493). Even the details of the parallel distribution of Philosophy and Science, in the Fourth Chapter, may be cursorily read, and not mastered, by the ordinary reader or casual student.

The Vocabulary which follows, contains definitions of all philosophic and other unusual terms.

The letters $\mathbf{t}, \mathbf{c}, \mathbf{a}$, are used as references to the Text, Commentary, and Annotation, with numbers referring to the Paragraphs. The letter c or a, annexed to a Paragraph in the Text, refers to the Commentary or Annotation upon that particular Paragraph of the Text, which Paragraph of the Text is then counter-referred to, by its number at the beginning of the Commentary or Annotation in question.

The Annotation consists largely of Quotations from other Authors and of Excerpts from my own earlier and incomplete works remaining in manuscript. These latter will be indicated by the letters O. M., signifying Older Manuscripts.

Abbreviations. Gr. Greek, Lat. Latin, Ger. German, Fr. French, It. Italian, Sp. Spanish, San. Sanscrit, Eng. English, Str. O. Structural Outline, cf. (Latin, confer), adduce, compare, P. S. Primary Synopsis.

Alwato (see Title Page) is also denominated, somewhat more technically, Tikiwa. (Pronounce Ahl-wah-to, Tee-kee-wah.)

## VOCABULARY.

*     *         * "Ler not the truth you do feel be lost, upon either your heart or intellect, through prejudice of that which you do not feel; take the lesson you do understand, and give your author credit for a meaning even when you perceive it not, and in time you may come to perceive a deep truth where you now see nothing but mystic words."-Preliminary Essay in Coleridge's Aids to Reflection.
*     * "Remember that New things are new," and do not judge them by old standards. Study, and comprehend, and then criticise.

The References to Text and Commentary annexed to some of the Definitions in the Vocabulary refer to points where More Specific Definitions occur, or Definitions which, from the connexions in which they stand, may be better illustrated. But, for the Complete List of such References consult the Index.

A collective view of the terms having special technical terminations, arranged Alphabetically, and then, in part, re-arranged in the Order of the Relation of the Ideas, will be found under the respective Terminations themselves, at the points where these last occur Alphabetically in the Vocabulary; for instance, under -Ism are collected the words Uniam, Duism, Naturism, etc., classified in both the modes above indicated.

In some cases the definitions which are given are such only as relate to new, and the Universologically technicrl, meanings of the words, while the same words have other and ordinary meanings, for which the ordinary Dictionary may be consulted.

## A.

As Ovo, (Latin), from the egg, from the origin or beginning.

Absolute, The, I. The Ideal Substratum of Being ; that which puts forth Manifestations or exhibits Phenomena; Real Being; The Esse as contrasted with The Existere ; in this sense, itself, however, a Mere Ideal Aspect of Being, equal (on Reflexion) to Nothing, while yet conceived of as The Positive Something, or the Undifferentiated Unity back of the Something and the Nothing (t. 753) ; II. Universal and Necessary Truth, Axiomatic Truth, The Seientismal Absolute, and III. The Total Complex of Being, Substrate and Phenomena; Omni-variant Reality, (a. 5, t. 267.)
Absolutism ; see-Is.x.
Absoluto-Absolute, The, The Absoluté in its most rigorous sense; that which ex-
cludes all "variableness or shadow of turning;" the extremest aspect of the Absolute negating all differentiation; see Absolute, The, I.
Absolutoid; see -Oid.
Absolutology; see -Ology.
Abstract, The, The Domain of Pure Idens, such as we have in thinking of mere Numbers or Forms, or of Laws, Truths, or Principles, drawn apart or separated from tho thought of any object or objects; as when we say two, instead of two things; applied by Spencer to a Grand Department of the Sciences, including Mathematics and Logic. (Lat. Ab(s), from; traho, to draw.) See Concrete and Abstract-Concrete.
Abstract-Concrete, Spencer's term for the Group of Sciences of which Chemistry, Me-
hanics and Physics are the Types. See Abract and Concrete.
Abstract-Concretism; see -Ism.
Abstract-Concretishys; see-Ismuls.
Abstract-Concretology; sce -Ulogy.
Abstractism; see-Ism.
Abstractisuus; sce-Ismus.
Abstractoid; see -Oid.
Abstractology ; see-Ology.
Absurdissima (Latin), most absurd.
Actionology; see -Ology.
Adjectivity, Phenomenality; the property
or being an Attribute.
Adjectivoin; see -Oid.
Adjectom ; see-Oid.
Adultisaus; see-Ismus.
Affection; see Feeling.
Affinity, a meeting at boundaries, t. 847.
A Fronte, (Latin), from above and before; see a priori, a tergo, a posteriori.
Ald-Differentiated, infinitely diversinied.
-Alogy, connecting vowel $a$ for $o$; see -Ology.

Altruistic, benevolent, devoted to the good of others, contrasts with Egoistic (selfish), Comte; (Lat. alter, other.)
Altrumism; see-Ism.
Alwato, or Tikiwa, (pronounced Ahl-wahto and Tee-kee-wah), The Newly discovered Scientific Universal Language, resulting from the Principles of Universology.
Axwatoso, Adjective from Alvoato ; relating to Alwato the New Scientific Universal Language.

Alwatoli, (-lee), Adverb from Alwato: after the nanuer, or in the style, of Alwato the New Scientific Universal Langnage.

Ambi-Directional, extending in the two opposite directions, as the arms or radii of a diameter from a centre, (Lat. ambo, вотн, and directio, Direction.)

Ambigu (pl. ambigu's), a term applied to the three weak consouant-sounds $h, y, w$.
Amplexus, (Latin), an embrace, a folding round.
Analogic, the Science of Analogy; related (especially) to Co-Existences, Solidarity, and Space, as (Cata-) logic is related (especially) to Co-Sequences, Continuity, and Time, (t. 321, and Commentary.) (Gr. ana, ayong; logos, ratio, proportion.)
Analogically, echoing; as from one domain to another; of a part, in one, answering to a corresponding part, in another.
analogicismes; see-Ismus.

Analogete, Thing, Idea, or Point of View, which echoes, in one Domain of Being, 10 one which corresponds with, or is analugous to it, in another Domain, and which is, then, in term, its Analogue.

Analogy, an underlying Identity or Likeness in Ubjects or Spheres which are superficially different; an echo of Similarity in all Spheres of Being, based on the Unity of Law; such that it renders a Science of the Universe possible (t. 59 ); see Correspondence.

Analysis, a separating of Elements or Parts; Differentiation; Duism; used by Comte for a Disruptive and Revolutionary stage of Society ; The Higher Mathematics; Induction as a Scientific Method, (a. 12-14, t. 198.) (Gr. ana, AMong ; luo, to loosen.)

Analytic(al), relating to Abstract Elements, to the Necessary Truths or Fundamental Axioms of Being; to the Irternal and Occult or Recondite Grounds of Generalization, matters of exact discorery, as contrasted with Encyclopædic or Broad Generalizations grounded on the facts of observation ; used also for Inductive; see Analysis.
Analytical Generalizations, Generalizations founded on Analysis and the Discovery of Necessary Laws, which rule as well in the Least Particular, as in The Largest Sphere (t. 1012) ; see Observational Generalizations.

Analytismal; see-Ismal.
Analytoid; see -Oid.
Avastasis, resurrection; (Gr.ana UP, stasis a placivg.
Angulism; sce -Ism.
Animisar ; see -Ism.
Anoetic, Unknowable, Ferrier, (Gr. a privative, noêios, Knowable.)
Anthropism; see-Ism.
Anthropoid; see -Oid.
Anthropology; see-Ology.
Antither, an Entical or Real Comnterpart, as an Opposite Hemisphere, or as a Partuer in Marriage or in the Dance ; contrasts with Thet, that which is first considered and is then so counterparted. (t. 379.)
Antithetical, Opposed, or Contrasted; opposite to, and contrasted with, but correlated; (G. anti, over, AGALNsT, and tithemi, to put or place.)

Ante-natal, previous to birth; that which relates to the foetal life.

Anthropic, relating to man; in the human shape (when applied to Form), (t. 964.)

Antimopism; see-Isar.
Anthropo-Corporology; see -Ology.
Anthropo-Mentology; see-Ology.
Anthropoidele, a little anthropoid; see Anthropoid, under -Oid.

Anthropologx; see-Oloat.
Antimopoyorpiism; see -Ism.
Aoristos Duas, defined, a. 24, t. 204.
Apeiron, (Greek), Unlimited.
Appetology; see -Ology.
A posteriori, from behind and below; from Principles gathered by observation; the Method in Science which proceeds from Observations of Facts to Principles and Laws, (Lat. a, from ; posterior, AFTER, or behind) ; see a tergo, a priori, a fronte.

A priori, from before and above; from Principles assumed as absolutely truc; the Method in Plilosophy and Science which proceeds from Principles to Facts; (Lat. a, fromi ; prior, first, or fronts); see a posteriori, a fronte, a tergo.
Arbitrism ; see-Ism.
Arbitrismal; see -Ismal.
Areitrismology; see -Ology.
Arbitrismus; see-Ismus.
Arcana, (Latin, Pl. of arcanum), Secrets, hidden or obscure truths.
"Arcana Ccelestia," (Latin), Heavenly
Secrets; the title of Swedenborg's principal work.

Arcanum, (Latin), something hidden or secret; a secret, something to be revealed.

Archetypes, Initial Type-Forms; see Ideal Type-Form; (Gr. arché, primacy; tupos, Type.)

Area, a surface included within given lines, (t. 824.)

Argument, anything duly constituted in Trigrade Developinent, (t. 594).

Art, Movement, Action, Doing, Performance, Perfection; The stage of Tastefnl Modification, atter that of Primitive Crudity, (Nature), and that of Intellectual Rectification
(Science); Doing, especially doing well or right, in every department of human activity.)

Articulation, little jointing ; distinct and seriated statement, (Lat. articulus, 1 Little joint.)

Artism; see -Ism.
Artismology; see-Ology.
Artismus; see -Ismus.
Arto-Concretism; see-Ism.
Arto-Philosophy, The Philosophy which results from the interblending of NaturoMetaphysics and Sciento-Philosophy, which see.

Artoid ; see -Oid.
Ascendants, Ancestry, t. 980.
Aspect, side-surface, -look, or -view; a mode of looking at a subject.

Aspectual, relating to an Aspect or Phase of Being, not to the Entity, or Being as such.
A Tergo, from behind; (Lat. a, from; tergum, тне Back); see a fronte, a priori, a posteriori.

Aromists, ancient Greek Philosophers who held to a theory resembling the Atomic theory of Dalton.

Attenuations, minutenesses, thinned out or refined states of Being.

Attributions, properties, predicates.
Autonomy, Self-government, (Gr. autos, self, and nomos, Law.)

Axial, Diametrical, in a standard or other primitive sense, passing through the centre in any of the three dimensions, so forming an Axis or line of departure from which declination and inclination, Interprodimensionality, may then be reckoned, by Degrees.

Axiom, (Greek, pl. Axioms or Axiomata), a self-evident truth, adopted in any science as a base-line from which the subsequent reasonings take their departure.

Axiomatic, self-evident.
Axis, an Axial Line; see Axial.

## B.

Barology; see-Ology.
Basic, fundamental.
"Becomisa," The, that which is perpet-
ually coming to be, and ceasing to be, Existence in respect to Time and Succession ; see "Existence," and "Movement."

BI-Compocnd, doubly compound, com-
pound in a higher degree than the first and ordinary stage of composition.

Bi-furcation, brunching into two, like a fork; (Lat. bi or lis, Twice or double; furca, a FORK.)

Fi-lateral, two-sided; (Lat. bi or bis, twice or dolble, latus a side.

Bi-Trinacria, The Triangular shape of the Isle of Man, and of Sicily, has suggested, as their escutcheon, Three Human Legs united at top, and pointing in different directions. This figure is called Trinacria: Bi-Trinacria, the double of this figure, may be used to denote the figure constituted by the Three Axes of the Great Globe of Space, two of them uniting The Four Cardinal Points, and one
uniting the Zenith and Nadir; these Sir Arms (or Legs), going out from the common centre, are what is meant by Bi-Trinacriu.

Biology; see-Ology.
Brahm, The Absolute, personified as God, in the Hindoo Philosophy.

Brahma, one of the persons of the Hindoo Trinity.

## C.

Calculus, (Latin, Pl. Calculi), a method of Calculation; The Higher Mathematics; see Analysis.

Calorification, production of Heat.
Cavon, (Latin), Law, Rule, or Regulator.
Cardinal, Hinge-wise, (Lat. Cardo, a Hrnge) ; Pirotal, Capital, Chief; applied to the Principal Series of Numbers; see Cardinism, Ordinism, Ordinarism.

Cardinality, the Property of being Cardinal, or chief.

Cardinarism; see-Ism.
Cardinary, Transcendental, which see. Contrasts with Ordinary; related to the Cardinal Numbers as Ordinary to the Ordinal Numbers; see Ordinary, Fractionary, Integrary; Equismal, Inequismal, (t. 478. )

Cardinated, Hinged; arranged in a hingewise order or manuer; see Cardinism.

Cardinism; see-Ism.
Cardinismal; see -Ismal.
Cardintsmic; see-Ismc.
Cardinismes; see-Ismes.
Cardinold; see -Oid.
Carpes, the part of the skeleton which forms the wrist, between the fore arm and the hand.

Catalogic, Ordinary Logic; Syllogistic or School Logic ; related to Continuity, or Succession in Time; see Analogic.

Catalogicismus; see-Ismus.
Catholic, Universal; Perpetual; (Gr. Krthotikos, General, Universal; Unchanging, Perpetcal.)

The primary meaning of the term Catholic is Universal in Space, but its secondary meaning is Unchanging, or Universal in Time. The Greek word unifies in meaning both of these definitions. The New Catbolic Church, instituted now, and for the Future, is, therefore, only New in the sense that it is a new Unfolding and Dispensation of Principles which are eternal; new Relatively to
the Old (or Roman) Catholic Church and the Protestant Divergency, only in the sense in which they are new, relatively to Judaism and still older Religions; while yet the Fundamental Principles underlying the whole Religious Developinent, the Catholicity of all Space and all Time, are universal and unchanging, and, in that recondite and profound sense, infallible. See Catholic Church.

Catholio Cherch, The New; The New Church Organization and Order; the New Religious Dispensation and Development; spontaneously emerging from, on the one hand, the Centralizing, and from, on the other, the Divergent Religions and Dispensations of the Past; but now for the first time definitely founded and constituted, or to be constituted, in the scientific Discoreries of Universology, in the Broad and Integrating Generalizations of the Philosophy of Integralism, and in the Practical Organic Potency of Pantarchal Order and Administration.
The Old Catholicism is the Centering Stem of the Religious Derelopment of Christeudom, but sins in the direction of becoming a merely Repressive Spiritual Despotism. Protestantism, with its lugical dependencies, Infidelity and Atheism, is symbolized in the Radiating and Ascending Branches of The Common Tree. The Older Religions are the hidden, and grovelling, but indispensable Root ; Arbitrary and Hierarchical, as in the Religions of Egypt and Hindostan, or else Rational, Free and Protestant-like, as in the Tau-ism of China, repeating inversely-as Tap-root or -Roots, and Radicles-the Ascending Unism and Dursy. The New Catholicism is The Totality of the Tree, Root, Rootlets, Stem, Branches and Twigs, reconciled in their finally recognized Entirety, and culminating in The Flowering, and the twelre-fold Fruitage, of this Tree of the Ages. "And he showed me a pure River of the Water of Life,
[Truth ?] clear as crystal [lucidly proven?] proceeding out of the throne of God and the Lamb," [The central fountain of Truth and Goodness.] In the midst of the street of $i t$, [The Grandis Ordo Eventuum, Ordinality, Ongoing, in Time], and on either side of it, [Cardinality, Cardinated or Side-wise arrangement, in Space], was there The Tree of Life, which bore twelve mamer of fruits [Spacic Distribution, Co-existences, in Scale of Twelve], and yielded her fruit every month, [Tempic Distribution, Co-Sequences, in Scale of Twelve]; and the leaves of the Tree were for the healing of the Nations." Revelations, xxii, 1, 2, 3. See Catholic, Catholic Church, The Old; Cardinism, and Ordinism, Grandis Ordo Eventuum, Collateration.
Catholic Cherch, The Old, (or Roman), The Central or Mother Church of Christendom, concentering, unifying, or, technically, Unismal in Organization, Faith, Policr, and Aspiration; contrasted in character with the Divergency and Sectarian Tendencies of Protestantism, which is technically Duismal. Both are destined to mutaal Reconciliation and final Harmony in the Higher, Pivoted, Omnivariant Unity, or, technically, in the Integrative Trinism, of the New Catholic Church of the Future. America is destined, relnet as we may, to be extensively permeated by Institutional influences derived from Rome; and the Old World is, at the same time, destined, in like manner, to be thoroughly imbued with American, Republican, and Protestant tendencies ; the two counteracting and interblending currents of development ultimating in a Higher Composite Development than any which the world has heretofore reached, or could otherwise attain to. The spirit of the Roman Catholic Church, brought into constant attrition with the mental and political emancipation of the New Age, and of the West, however identical her constitntion may be in Fundamentals, can never be the same as it was in the early, the middle, or the recent ages; and, on the other hand, the ultra Self-Assertion and determined Individualism of German Rationalism and American Republicanism will undergo the requisite modification under the deferential and devont tendencies of Antiquity and the Eastern World. Europe, Asia, and Africa will gain the Divergent Individuality which frees from excessive constraint, and America the Convergent Individuality, the worshipful respect
for all true authority, and the acceptance of discipline and subordination, which she, in turn, needs. The authorities of the Old Catholic Church (in order not to find themselves hereafter placed in a false position) shonld be cantious not prematurely or inconsiderately to repugn the Dogma of the New Catholic Church, to which the Old Church will have, in the end, to defer-the seemingly new Dogma being no other than a logical return, upon a higher plane, rationally and intelligently, to the fundamental positions of the Old Church, vindicating the infallibility of her instinctual wisdom in a better sense than any past understanding of the subject could do. The Old, or Mother Church, is destined, in fine, ultimately to blend with, and to become a recognized, loyal, and constituent portion, merely, of, the larger, Univariant, and final Catholicity. (t. 1123.) See Catholic Church, The New; Catholic ; Cardinal, and Cardinism under-Issy; Univariety, Index, Words, Divergent Individuality, and Convergent Individuality.
Celestral, heavenly, (Lat. Colum, HeaVEN.)

Celestioid ; see -Oid.
Cephalization, the production or supply of a head, as in animals which have attained to that governing appendage. (Gr. Kephalē, Head.)

Cerebral, what relates to the Brain. (Lat. Cerebrum, the Brain.)
Chalaza, in Embryology, a twisted cord which connects the yolk with the apex of the shell of the egg.

Chaos, the Primal Confusion of Things, or of the Elements out of which Things were to be formed.

## Circlism: see -Ism.

Citravalysis, Aualysis of the minor or incomplete order; see Citranalytical.

Citranalytical, analytical in a minor or imperiect degree, contrasts with ultranalytical. (c. 5, t. 345.)

Classification, the act of forming into a Class or Classes; distribution into sets, sorts, or ranks.

Classiology; see-Ology.
Claficle, the collar bone.
Clef, a Figure, or other Character or Ker, selected to denote a Class or Domain.

Coccrx, the tapering small column or scries of bones which forms the continuation downward from the sacrum to the
extremity of the entire bony column of the trunk.
${ }^{\circ} \mathrm{C}$--existences, Different Phenomena which occur in the same instant of Time, and are hence, as it were, extended side-by-side-wise, in Space, as if the Progress of Erents were, for the Moment, arrested, or as if the Universe were stationary in Space, without Motion in Time; see Co-Sequences.
Coherest, adhering together; cardinated and pivoted.

Concidence, Repetitive Analogy, (c. 12, t. 503.)

Col-lateration, side-by-sideness; see Coexistences.
Comparatoid ; see -Oid.
Comparology; see-Ology.
Composite, the high artistic Irkton, the state of combined Principles harmonized with each other.
Coxposition, in the sense of the Artist; the designing, and the harmonic combination of the parts, of a picture or other work of art.
Cowpositr, the state of being compounded or made up of different factors or elements.
Contear, relating to Comte (Auguste), and his Philosophy.

Conation, an effort towards action; the term which the Metaphysicians employ to denote the active attribute of the mind; inciudes Will and Desire. (Lat. conor, то uxdertake, attempt, try.)
Concrete, The, the Domain of Real Objects or Things, as distinguished from that of Pure Ideas; applied by Spencer to the Grand Department of the Scieuces which deal with real objects, Mineral, Vegetable, Animal, (not mere Substances as Chemistry, nor Pure Ideas as Logic.) (Lat. Con, with Cresco, to grow, -Grown together.) See Abstract, and $A b$ stract Concrete.

Concretism; see -Isy.
Concretismus; see -Ismes.
Concretoid; see -Oid.
Concretology ; see -Ology.
Conditioned, The, contrasted with The Unconditioned, (t. 240.)
Conditiontsurs ; see -Isals.
Conditionoid; see - Uid.
Congeries, a collection of various objects or atoms in one mass or aggregate.

Consensus Animorua, (Latin), the consent of (different) minds.
Conservatism; see-Ism.

Conservative, tending to conserve, preserve, or guard things in the condition in which they are ; construed by Progressionists as opposed to Progression, and by Conservatives, themselves, as opposed to Innovation and Destructive Radicalism.

Consistency, the degree of thickness or density of any substance or stuff, (t. 63, 675); the composity of Existence and Movement in the Universe at large, ( $t$. 666.)

Conspectically, as one thing seen in all its parts.

Constant-ial, related to Constants, in Mathematics, and what is Analogous with them; contrasts with Fluctional; see Static.

Contert, in Philosophy, that which is held or contained ; see Continent. (Lat. Con, Witi ; teneo, то ноцд.)
Continent, that which holds or contains; sec Content. The Content is enclosed within or sustained upon the Continent.

Contincity, the Conditions of Being which relate to Time and Co-Sequences; as the Successional Relations of Humanity, making the Historical Unity of the Race, from the earliest to the latest times.
Contergent, tending towards Centricity and Unity.

Confergo-Divergent, converging on a Centre, in one drift of direction, and diverging from the same centre, riewed in the opposite drift of direction; see Divergo-Convergent.

Confersion, change, turning about, or the-other-eud-first. (Lat. con, wirt, and verto, to tuRn.)

Confertible, capable of undergoing change.
Confertible ldentity, the idea that All Things are All Things else, or that they differ only in degree, and may be converted or changed into each other.

Co-ordination, orderly arrangement; side-by-sideness.

Corpora Catervosa, (Latin), anatomical name for the bodies which compose the mass of the penis.

Corporology ; sce-Ology.
Corpes, (Latin for body, whence English, corpse), the dead body.
Correlation, Tendential Analogy, (c. 12, t. 503.)

Correlative, (con-relative), reciprocally answering to.

Correspondences, Echocs of Similarity through different Domains of Being; see Analogue.

Co-Sequences, Phenomena which occur in succession, or one after the other, in Time; see Co-Existences.
Cosmical, relating to the Cosmos or Objective World; see Cosmos.

Cosmisu; see -Ism.
Cosmogony, the genetic origin or creation of the World, or of Worlds; or of the Universe. (Gr. Cosmos, World ; Goné, offspring.)
Coshological; see-Ology.
Cosmoloay ; see -Oloay.
Cosyos, (Greek), World, The World, as discriminated from Man, or the rational inhabitants of the world.
Cour d'Cill, (French), a glance of the eye, a mere slight view.

Cranioscopy, the phrenological method of reading character by the "bumps." (Gr. Lranion, the Selle ; skopeo, to looe.)
Crassitudes, thick, heavy things.
Credo, (Latin), I believe; a Creed, a formula of Faith.

Creclal, in the shape of a cross; severely testing. (Lat. crux, $\mathbf{a}$ Cross.)

Cuboid; see -Oid.
Cubule; a little cube.
Culture, cultivation, ripening, polish, improvement.

Cultus, worship; instituted worship for the culture of souls.
Curriculca, (Latin), a little course or career.

Curtiss; see-Ism.

## D.

Decrdoous, falling away, applied to the milk teeth or first set of teeth of the child.
Dectssating, crossing ; generally at acute angles; see Decussation.
Decissation, a crossing, generally at acute angles, as the nerve-fibres, at the punctum $v i t c e$, from the right and left hemispheres of ${ }^{\prime}$ the brain to the opposite sides of the body.
Deduction, the Method in Science which proceeds from Principles and Established Scientific Laws to Facts; contrasts with Induction. There is an Anticipatory aud PseudoDeductive Method, from the use of which, prior to the establishment of the Inductive or Baconian Method, the term Deduction was brought into a disrepute, in the Scientific World, from which it is now recovering by the restoration of a legitimate use of the term.
Dedrotive, relating to Deduction, or the Deductive Method; see Induction.
Determinations, pointings in different directions, as Right and Left, etc.

Deternhatisy ; see -Ism.
Determinismes ; see-Isyrs.
$\mathrm{Deut}_{\mathrm{E}}^{\mathrm{er})}$ o-Christian, 1. relating to the New or Second Christian Dispensation, resulting from the full admission and the excessive magnification of the Principle of Rationality; and from the Element of Knowledge as completely replacing Faith, Transitional. 2. The same as lapping over upon, and substantially, or in preponderance, characterizing and governing the Trito-Christian, or Final Christian and Religious Dispensation and Develop-
ment, which will, nevertheless, reinstate, in subdominance, the Element of Faith, (c. 28, t. 136.) (Gr. Deuteros, Second) ; see ProtoChristian and Trito-Christian.

Delt(er)o-Christianism; see-Isy.
Devt(er)o-Christianismes; see-Ismes.
Detterbo-Religionisar; see-Iss.
$\operatorname{Dedt}(\mathrm{er})$ o-Religionisurcs; see-Isacts.
Dedt er,o-Religiots, relating to the second or Trausitional Grand Religious Stage in the World, affecting especially the Present Age; see Deutero-Christian.
Deut(er)o-Social, relating to the Present Trausitional Age ; see Deutero-Christian, and Deutero-Religious.
Devt(er)o-Societisy; see-Jsy.
Deut(er)o-Societismes; see-Isacts.
Devto; see Deutero.
Diagras, a figure delineated for the purposes of illustration or demonstration.
Diagramyatic, relating to a diagram, or to diagrams.
Dialectio ( -al , adj.), pertaining to discussion or a two-sided view of things, or to any Cardinismal Arrangement; (subs.), The Logic of Discussion, or Two-Sided Reasoning; or of Double View. (Gr. dia, rigir throtgi, thorocoif; lejo, to speae;) (t. 329.)

Diamagnetism; see-Isy.
Diametrical, through the centre, (Gr. dia, throlgif ; metron, Meastre.)
Diamitrid, an embodied Diameter, as a real Shaft or axis, (c. 7, t. 43.)

Dismitrit, an Abstract Linear Diameter.
Diastole, the dilatation of the heart, auricles, and arteries, opposed to systole, or contraction ; the two completing the Rhythmical Movement.

Differential, causing or producing difference; relating to difference; in Mathematics, applied to a branch or aspect of the Calculus.

Differentiation, the making of things to be different, Spencer.
Differentiative, tending to or producing Differentiation.
Digiti, (Latin, plural of digitus,) Fingers.
Diremptive, Hickok, applied to one variety of Force.
Dispensation, a particular stage or régime of affairs, lasting generally through some number of generations.

Distance, a standing asunder, (t. 933.)
Divergence; see Divergent.
Divergent, tending decentrally, towards Separation and Disunity.
Divergo-Convergent, diverging from, and converging towards, a Centre; Radiation viewed in this mode of double Aspect; The Inverse mode of beginning and conducting the inspection is Convergo-Divergent, which see. Combinations to result from these two compound terms thus, Convergo-Diver-genta-Divergo-Convergent (view from base to apex and back to base + view from apex to base and back to apex), would be requisite to describe the fourfold aspect of this simple geometrical phenomenon; The Triangle or Cone, or Pyramid. Finally the donbling of this view, with reversal, would be requisite to describe Forms which are fundamentally important, in the new forthcoming Science of Morphology, and Forms with which the Mathematician is already familiar, but which he has no means of uaming; thus Convergo-Divergenta-Diver-go-Convergent; Divergo-Convergenta-ConvergoDivergent, would be the requisite term to describe accurately the common mathematical conception of the figure formed by the two Nappes of a Cone, meeting at their apices, (the hour-glass form), and Divergo-Convergen-ta-Convergo-Divergent ; Convergo-Divergenta-Divergo-Convergent to describe the figure formed by the two same Nappes or Cones meeting at their bases (proximately the cigar-form). When, then, all radical varieties of form (and none more important than pre-
cisely these two) come to be recognized in Science, as Essential Types of Truth, in Morals, in Religion, and in all other Domains, (t. 505,930 ), it becomes obvious that Language itself must be reconstructed to meet the demands of such Science; and that the Scientific World must replace its present awkward and unscientific procedure, in the construction of Technicals, taking a four syllable word, for instance, like anthropos, from the Greek, as an Element, as in anthropomorphism, (anthropos, Man; morphè, FORx), by something better. The true Elements of technical word-building are the Phonelic Elements; the single Fowels or Consonants, which should begin, and do begin, in Nature, by representing not only ideas of some sort, but precisely The True Elementary Ideas of all Thought and Being. If there were a demand for compounding and then Bi -compounding such long words, as Anthropomorphism, the absurdity of even attempting it would be obvious; but words every vowel and consonant of which is significant, readily carry the composition to any height which is requisite. See-Ism, Univariety, Universology; "Treatise on a Universal Alphabet," by the Author, in Contineutal Monthly, for June, 1864; "Alphabet of the Universe" and "Universal Alphabet," "Introduction to Alwato," "Structural Outline of Universology," etc. (a. 19, t. 152.)

DOGMA, (Greek), doctrine or teaching.
Dominant, (adj.), governing; (subst.), that which governs.
Drift, the single "direction" of a given "direction;" the view along a line in a single "direction;" the operation of a force in the same manner; an Order, a procedure, t. 616.

Duad, the collective Two, as the Unit is the segregated One.

Duacity, Twoness, the first Stage of Plurality. (Lat. Duo, Two.)

Dualism; see -Ism.
Duism; see -Ism.
Duismal; see -Ismal.
Durimus; see -Ismus.
Duord ; see -Oid.
Dynamic, potent, efficient, effective; used in Homeopathy for the hidden, obscure, unaccountable force, or latent-spiritual efficiency of a specific remedy over a given disease; see Dynamis.

Dranams, (Greek), Force ; Power; Energy.
E.

Ecnosophio, relating to Echosophy.
Echosophy, Positive Science, as distinguished from Philosophy, Metaphysics, Speculation, Theory, etc. (c. 3, t. 12.)
Eclecticism; see-Isy.
Ecstatic, (adj.), inexpressibly exquisite; (subs.), a Domain of Being midway from the Absolute to the Infinite, Analogous with the locality and Function of the Genitals, (t.444.)
Eestatology; see-Ology.
Egeneto, (Greek), has become.
Ego, (Latin), I, Myself.
Egoistio, inspired by selfishness or Egoism; see Egoism.
Eidolon, an image or statue; an ideal form or Typical object.
Elaborismos; see -Ismus.
Elementism; see-Ism.
Elementismus; see -Ismus.
Elementology; see-Ology.
Elements, First Principles, Originators, Primitive Producers, Prime Factors or Constituents.

Elite, The, (French), Choice, Superior, applied to Classes or a Class of Pcople in Scciety.

Embryo, the first rudimentary organization of the fœtus in the womb, or of 2 plant in the germinating seed.
Embryology; see -Ology.
Empirical, what pertaius to, or is derived from, Experience; see Experiential.
Empiricism; see -Ism.
Encycloprdic, Universally agglomerative; Broadly Generalizing, contrasted with Radically Analytical, or Ultranalytical.

Ending; see Termination.
Endogenous, originating from within; applied to mental processes, means internal or spiritual, or operating from the inward consciousness ontwardly ; sce Exogenous.
Endo-Spacic, belouging to Internal Space, the space included within the limits of the Object considered; see Exo-Spacic.

Eindo Spiritual, relating to the Internal or Centering Spirit of the Being or Individual : contrasts with Exo-Spiritual, relating to the Circumambient and radiating Spiritual-Sphere-, (Atmosphere)-, or Euvironment; see Spirit.
Endo-Stabiliology; see-Ology.
Endo-Unit-ive, relating to the interior of the Unit; hence allied with Fractional ; see Exo-Unitive, and Universology-vowel $a$.

Engrenage, (French), Overlapping, dovetailing.

Ens, (Latin), Being, Real Object.
Entus, (Latin), plural of ens; Real Beings; Things whatsoever which exist; distinguished from mere Relations between Things.

Entente Cordiale, (French), cordial or friendly understanding.

Entical, relating to Ens, Entia, Entity, or Being as such; contrasts with Relational, and also with Aspectual.
Entities, Things; any Objects of Thought whatsoever as distinguished from the $R e-$ lations between such Objects; although in another sense the Relations themselves are objects of thought also, and are also, therefore, Entities, but of another order. Entities and Relations are the whole of Being-the Analogue of Entities, Points; that of Relations, Lines.
Entity; see Ens. This word is, I think, badly chosen by Comte to signify an imaginary or unreal conception. I employ it, on the coutrary, to denote Real Objects, or whatsoever is endowed by the mind, with Reality in contrast with Relations as intervening, ideal, quasi-Realities, or quasi-Entities, (t. 603.)

Epi-Cosmoloay; see-Ology.
Equa-Inequism: see-Ism.
Equated, made equal, brought into equation with each other.

Equation, a formal mathematical statement, by aid of the sign $=$, that one quantity is equal to another quantity, thus $1+3$ $=2+2$; or, more gencrally, any instance of equality; apposition, with equality, as the identity of meaning between the thing defined and its definition.

Equism ; see -Ism.
Equismal; see-Ismal.
Equismus; see -Ismus.
Equiry, equality of advantage in any mutual transaction.

Esse, (Latin, meaning to be), Absolute Being, Being in se, contrasts with Existere; sce The Absolute.

Esthetical, pertaining to the science of Taste. (Gr. Aisthétikos, relating to Perception by tie Senses.)

Etireria, the "sccond form of matter," attenuated spirit-like materiality.

Ethics, the Science of Morals, (a. 1, c. 5, t. 5.)

Etiology; see -Ology.
Etreka, (Greek), I have found, or discoitred [it]; attributed as an exclamation of triumpl to Archimedes, on the discovery of Specific Gravity.
Erentuation, the Series or Continuity of Events ; the Succession of Events in Time.

Erolution, an unrolling or folding out, as the petals of a bud when it becomes a flower, (Lat. $e[$ ex], from or fron within, and volvo, to Roll.)

## Exactology; see -Ology.

Ex-Cathedra, (Latin), from the seat of judgment, or from the pulpit or desk, meaning authoritatively, arbitrismally.
Excersts, a running forth, (Lat. ex, From: curro, то ren.)
"Existence," Being, manifested by its Phenomena, especially in a state of Rest in Space, as contrasted with "Movement," used for Being in Morement, in Time.

## Existential, relating to Existence.

Existere, Phenomenality; The Manifestations of Being, contrasted by Swedenborg with Esse, as Being in se, or Absolute Being; see Esse, the Absolute.

Exogenots, originating or growing from without; applied to mental processes means external or mundane, or operating from the
outer consciousness inwardly; see Endogenous.
Exo-Spacic, belonging to External Space, the Space excluded from the Object considered; see Endo-Spacic.

Exo-Spiritual, relating to the circum-ambient-and-radiating-Spiritual-Sphere-, (At-mosphere)-, or Environment, of the Being or Individual; contrasts with Endo-Spiritual, relating to the Interior-or-Centering-Spirit, allied with the Soul; see Spirit.

Exo-Stabiliology; see-Ology.
Exo-Unitive, relating to what is exterior to the Unit; hence allied with Integers or whole Numbers, and by Analogy to Society as contrasted with the Individual ; see ExoSpacic, and Universology-rowel $a$.

Expertentialism; see-Ism.
Experientioid; see -Oid.
Explicated, developed into the minutiæ of differentiation and details.
Extremists, in a good sense those who are radical and thorough, those who carry things out to "the bitter end," or as far as possible or requisite; in a bad sense those who are organized or who act in a one-sided or extreme manner.
Ex fi termint, (Latin), from the (mere) force of the term.

## F.

Fabrication, creation, building, or making. (Lat. Faber, a Butlder or Maker.)
Facta, (Latin), Things done; Realities externally and materially considered, contrasted with Eternal Principles and Necessary Laws; see Entities and Entia.

Factor, a constituent; one of the parts which go to make up a whole.

Faith, "Conviction from Testimony," Hickok.

Fascictles, (Latin), a little bundle.
Feeling, as a Department of the Mind, with the Metaphrsicians, is the Sensational Faculty; the "Affection" of Comte; the "Love" of Swedenborg.

Feminism; see -Ism.
Femintsmal; see -Ismal.
Feminismes; see -Ismes.
Femivoid; see -Oid.
Fetichisk, Idolatry, the worship of
"stocks and stones."
Fluctional. ware-like, currental, flowing.
Focus, (Latin, for a fire-place); a central
fire, any central reservoir of forces and activities.
Focal, relating to a focus, or the focus.
Fexts, the unborn child; the child in the womb.
Formula, (Latin, pl. Formulæ), a terse and formal statement of a Principle or Truth, employed for brevity, force, and ease of reference.

Fractionary, relating to Fractions or the Aliquot Sectionizing of Unity, and to the Domain of Affairs analogons with them.

Fractiontsmes ; see -Ismes.
Fractionisy: see-Ism.
Fractiontsyology; see-Ologx.
Function, action or performance, as of the daties of an office; the action or office of any particular part or all the parts of an animal body, or of any body; interior action more generally, in this sense, than exterior. (Lat. FCNGOR, to perform.)

Functionology; see-Ology.
Findamenticy, (Latin, pl. fundamenta), foundation or seat.

## G.

Gatias, relating to Gall, founder of herent Necessity of Law in the midst of BePhrenology.
Generalization, Large or Broad Tiewz of a Subject, omitting Details and Particulars ; The process of reducing particulars to their generals or genera; the state or condition so attained to, (t. 334.)
Generilogy; sec-Ology.
Gexeraloid; see -Oid.
Geocentric, relating to the old theory of the solar system which made the earth the centre of it. (Gr. gè, Eartr; kentron, s Cemtre.) See Heliocentric.

Geouetricas, brought into regular form.
Gestirologr; see-Ologr.
Glodisu; see-Isr.
Globord; see -Oid.
Globose, relating to a globe.
Globcle, a little globe.
God, The Etymology of the English (and Tentonic) word is cousidered obscare. The Latin Deus, Sanscrit Dera, Greek Zeus, is allied with the Sanscrit Dyu, Duy, meaning The Heavens, opening up to the Light. (See Max Mūller, Science of Language, $2 d$ Series, Cb. 10.) The Chinese Tien has not, even yet, differentiated the ideas of Heaven and God; this confusion offering a serious difficulty to the Christian missionaries. A God is primarily a Pivotal Person, a Representative Man, or eren an animal or inanimate objeet, or an Abstract Attribute or Principle, considered, from any point of riew, as governing or presiding over human affairs. Hence there are, at first, innumerable Gods (Polytheism); but Pivots, however elerated and central, while they remain plural at all, have still their Pivot, and the ascension of the Pyramid of Honor or Worship reaches necessarily, at last, the apex or aeme, in the idea of One Sole God, (Monotheism.)
This primitive doableness of meaning, according as the Supremacy or God-character is assigned to a Person or other real object, on the one hand, or to an Abstract Principle or Central Knot of Abstract Principles, the Ining, the Logos of Plato and St. John, on the other hand, remains, however, in Theology, and is always the broadest ground of difference among Theologians. The one Doctrine is Pietism and Arbitrism, the other is Rationalism and Logicism. Each party is equally entitled to the use of the term God, to denote the conception of Universal Pivotism, or of an Overruling, Central Director or Directing Potency of the Affairs of the Universe.
The personal conception of God is Unismal; The Logos or Logical conception is Duismal. The Trinismal Conception (and more subtly the Tri-unismal) will be the Reconciliation and Harmony of the two earlier forms of the conception in a Higher, more Distinct, and doubtless much modified conception of God and of his nature and attributes, which will then be the centering Basis of the Theology of the Future, and this, in turn, the Core of Universological Learning. Sce Pivotal, Polytheism, Monotheism, Arbitrism, Logicism, Unismal, Duismal, Trinismal and Tri-unismal ; Integralism, Cardinism, and Theology.
Goneologr; see -Ology.
Graid Etre, Le, (French), The Grand Being; Collective Humanity or Human Society as the object of devotion and worship; Comte.

Grandis Ordo Erextctin, (Latin), the Grand Order of Events; The Lniversal Ongoing or Procession in Time.

Graid Max, The, Universal Humanity, or The Universe of Rational Existences, especially in the Hearens, The Superior Department of the Spirit-World, conceived of as organized and functionating in the form (analogically) of One Man, aud as One Rational Being; Swedenborg.
$G_{\text {rocnd, }}$ Foundation, Basis, the most fundamental part of anything ; that which npholds the rest; used in Philosophy, in this sense, technicall.

Gruxdsaetze, (German), Principles, (Ground-Settings.)
H.

Habitat, the locality occupied by the particular animal or being.
Hadeat, relating to Hades, or the world of Spirits.

Haso, the "Glory" with which Painters surround the heads of Saints.
Hapmost, agreement of parts, as of the constituent elements of a symphony in music.

Heavens, The, a term implied by Paul, and used by Swedenborg, for the different departments or stories of what is ordinarily called Heaven; see The Hells.

Hegelian, relating to Hegel and his Philosophy.
Helicism; see -Ism.
Heliocentric, relating to the new or Copernican theory of the solar system, which makes the sun to be the centre of it. (Gr. Helios, the Sun; kentron, Centre.) See Geocentric.
Hells, a term ased by Swedenborg for the different departments or stories of what is ordinarily called Hell; see Heavens.
Hemiplegia, faralysis or palsy of one side of the body.
Hermetic, (from Hermes, the Greek name for Mercury), applied to a school of mystical Philosophers of the Middle Ages who treated of Universal Principles, of the Hierarchy of Celestial Beings, of Medicine, etc.

Heterogeneous, different in nature and properties ; composed of different materials or
sorts of things. (Gr. heteros, different ; ge, nos, kind.) See Homogeneous.
Hierarchy, a Sacred or Priestly Order; an Asceuding and Descending Scale of Superiors and Inferiors, as of Officers and Subordinates, in any Domain; contrasted with the Level of Democracy, (t. 924.)

Hierarchical, (adj.), relating to Hierarchy.

Hieroglyphic, emblematic, symbolic.
Historical Order; see Natural Order.
Hogarthian, derived from, or discovered by, Hogarth, the painter.

Hominal, relating toman. (Lat. homo, Man.)
Homogeneous, alike in nature and properties ; all of one kind. (Gr. homos, like; genos, kind.) See Heterogeneous.

Homoromeria, defined, a. 36, t. 204, p. 164.
Humanitarian, benevolent, philanthropic, interested in the universal affairs of mankind.

Hybridity, the crossing of different species, as of animals; in respect to Languages, the deriving of a word in part from one language, and in part from another.
I.

Ideala-Spiritual, relating at the same time to the Ideal and to the Spiritual.

Idealism; see -Ism.
Ideal Order; see Logical Order.
Ideal Typical Plan, (Transcendental); the Pattern-Scheme or Congeriated Arrangement of Ideal Type-Forms in a larger System or Plan; see Type-Form, (t. 1046, 1049.)
Idea-Phronesis, (Greek), the individual or personal variety of knowledge as contrasted with the Koinos Logos, which see.

Idea-Phronicism; see-Ism.
Ideas, Forms of Thought, (Gr. idea, formr, semblance, look.)
Ideation, the formation of Ideas.
Identity,
Ideology; see -Ology.
Ideo-real, that which, in thought, is real.
Ideo-unrear, that which, in thought, is unreal.

Imanent, indwelling.
Inclinism; see -Ism.
Incoherence, fragmentary or chaotic state, as of Society prior to any harmonic organization and unity; disarrangement; the absence of pivoted and cardinated organization.

Indeterytnism ; sce-Ism.
Indeterminismology; see -Ology.
Indeterminismus; sce -Ismus.
Individualism; see -Ism.
Individuality, the inherent differentiation of character which constitutes the Individual and causes him to differ from other Individuals; Doctrine of the same, and of its social consequences.

Induction, the Method in Science which proceeds from the Facts of Observation to some Rational Inference from those facts, which is then established as a Law; see Deduction, (c. 1-9, t. 321 ; c. 1-7, t. 345.)

Inductive, relating to Induction.
Industrial Atrraction, doctrine of Fourier, that all labor is, intrinsically, and can, by proper social adjustments, be rendered practically, agreeable or attractive.

Ineffable, what cannot be spoken or expressed.

Inequa-Equism; see-Ism.
Inequism ; see -Ism.
Inequismos; see -Ismes.
Inexpugnable, which cannot be separated or expelled; literally, un-fight-out-
able. (Latin in, Not; ex, out of ; pugno, тo fight.)
Inexplgnability, the state of being Inexpugnable.

In Extenso, (Latin), extensively, in full extent.

Infanta-Feminoidal, corresponding with that which characterizes the child and the woman ; mother-and-child-state.
Infantoid; see -Oid.
Infernalism; sec-Ism.
Inferinology; see-Ology.
Infinitesimals, a term applied in the Mathematics to infinitely small quantities; fractionally less than any assiguable quantity.

Inflistology; sec-Ology.
Inierence, that which is permanent or eternal in the constitution of Being, (t. 759.)

Inorganism; see-Isy.
Inorganismology; see -Ology.
Inorganismus; sec-Ismes.
Instantinlity, the actualizing Point, where the point in Space and the point in Time concur in the Event.
Inster, that part of the bony fabric ot the foot which is situated between the tarsus and the toes.

Integer, a Whole Number, a Unit, or Unity, as distinct from a fraction.
Integerism; see -Ism.
Integerismology; see-Ology.

Integerismes; see -Ismus.
Integral, muny-sided, all-sided, and, hence, both compound and entire; whole, complete.
Integralism; sec -Isar.
Integralismus; see -1smus.
Integrality, wholeness.
Integration, combining, the unition oi aspects or parts in a whole; the binding or growing of things together into a whole, Spencer.
Integrative, rendering whole, complete or ALl-sided.
Integrism; sce -Ism.
Intelligence; see Knowing.
Inter-Atomic, coming between atoms.
Jnterishology; see -Ology.
Intersusception or Intussusception, a taking up into. (Lat. inter, or intus, into, or within, and suscipin, to tafe up, like the closing up of a telescope.)
Inturton, immediate observation or inspection; the same when interior or spiritual, or by the Internal Senses; hence Immediate and Synstatical Knowledge, allied with Instinct and Feeling, and contrusted with Finowledge by Mental Analysis and Intellectual Reflection, this last allied with Clear Vision and The Sense of Sight.

Intuitional, what relates to the Intuition as a means of Knowing.

## -ISM.

-Ism, a Termination or Ending directly attached to the Stem of a Word, to denote an Abstract Principle derived from a Quality or Relational Attribute of some Concrete Embodiment or Sphere of Being; so that the same Principle or Spirit of Attribution or Relation, occurring in any and all other objects and spheres, is identified with it as the same; making the basis of an Abstraction from all Special Spheres. The Ism is therefore Comparological; or, transcending all special Spheres, it passes from Sphere to Sphere, while yet originally, and, always predominantly, it is characterized by that one in which it is first observed and where it specially prevails. It differs in this, essentially, from the termination -ITy (Monocrematic or Monospheric) which denotes the individual (Substantivoidal) Spirit, or the In-
most, of a Single Object or Sphere, and ITs Radiation or Ettux, merely, abroad.

It is one of the subtlest observations ever made by any thinker, when Emerson observes, that: "In order to be Un-ion, there must first be Un-its." It is also a grand use of the idea which he intends, namely, that: In order to the existence of any Society (Union) wortly of the name, there must first be developed Individuals, Units, to be the Members or Constituents of The Larger Ideal Unit which we call Society-the $U n$-ion of the individual Un-its. But there is a closer, more metaphysical and analytical, and consequently a more elementary use, to be made of the idea stated by Emerson, than any Sociological application which it was his purpose to suggest. This more radical use of the thought cau be stated as follows:
$U_{\mathrm{N}}$-it or $\mathrm{U}_{\mathrm{N}}$-id (c. 7, t. 43) is the Individual One Object (Abstract or Concrete) which is observed. It is therefore single, or, in the absolute sense, One ; but Un-ion is the unition and classification of One Individual Unit with (at least) One Other Individual Unit, in a New Ideal Unit, (the -ion or -yun), which, as to the sensible fact, is now Two, and no longer One. We are now talking, therefore, not of One but of Two, while yet we retain the same Word-Stem (Un-, from the Latin Unus, One), in both these (seusuously speaking) totally opposite cases. It is only because we have passed up from the Plane of Material (or Materioid) Observations to the Ideal Plane, that we are authorized to continue to employ the same Word-Stem, having original reference to Unity; and there is this Antithetical Reflection (see Index) and Terminal Contersion into Opposites (t. 83) and Polar Antagnsisim (t. 225) between All Things of the Material, and All Things of the Ideal, Planes, or Domains of Being.
This subtle gliding or transfer of the meaning of words, quite unobserved by both speaker and hearer, by change of Plane, from a P imitive Meaning to, in a sense, The Preciseny Opposite Meaning, is the most fruitful source of dissension and incomprehensibility in all our discussions, the liability to which can only be securely guarded against by the Universological Discovery of a New and Radical Scientific Basis for Language itself. All existing languages are Instinctual and Naturoid in the character of their development, and are hence inherently inadequate to serve as the proper instrument of EXACT thinking; or to prompt and coypel Exact Thought, by the subtle exigencies of their own structure. These Higher Functions of Speech can only be performed by $S$ peech itself scientifically reconstructed upon a radically newo discovery of the Nature and Powers of the Elements of Speech itself; br, in other words, a Scientifically constructed Universal Language; upon which, as a Basis, the Materials now accumulated in all existing languages, sifted and polished, can be superinduced and wronght in, in the final Re-cast, Permanent Structure, and Artistic Embodiment of the One Planetary Language of the Future.

Unit is the Fact of Observation; Union is the Classification of that Fact with another similur Fact (or more than one such). Unit and Union are both, however, stages of, or
upon planes of, the Ordinary Domain of Science-the Natural Sciences. Un-rTY is the Soul of the Unit or Union, or else the generalized and more attenuated aspect of Union, or of Particular Instances of Union as New Ideal Units. It is, therefore, a Transcendental or Cardinary Fact, more Ideal still than mere Classification, or the Corporate constitution of the Single Ideal Unit. Generalization is higher than Classification, and is the Floor or Basement Degree of Transcendentalism. But Unity is still a Fact of Real Being (though Interior and Spiritual), and only therefore, in this lower sense, Cardinary, or above the Ordinary Range of Conception. It is Substantivoidal, and echoes still to the region of Substantives, (although of the abstract Substantives or Nouns,) in Grammar.
Finally, $U n$-siss is the naming of the more subtle and more truly Cardinary Idea, not relating to any single object or sphere, but to a Generalized Quality, occurring in many Spheres. It is not, therefore, substantivoidal or aualogous with Substantives even when Abstract, but with the Adjective and Prepositoonal Domain, the Domain of pure Qualities and Relations, (t. 488, and Index, word Adjectivity.) In respect, for example, to these several derivative words from the source Unus (One), Un-Ism denotes that aspect of permanent sameness which, whether in lower or higher spheres, whether in relation to ideas which are sensuously one, or sensuously many and ideally one, authorizes the retention of the same Word-Stem ( $U_{n}$-) throughout. Unisy is thus the most Abstract Spirit or the Pure Quality of the Number One; whether that quality be found in Un-it, the Primitive Simple Individual; in Un-ion, the new Ideal Compound Unit, really, or sensuously Two or Many; or in Un-ity, the generalized aspect of Units and Union in a somewhat vague abstraction, still, however, related to Thing. Unissis is, therefore, the exact, generalized, Adjective Quality, (of $\mathrm{O}_{\mathrm{NE}}$ ), like White, which occurs in the wool or in the snow, or in a thousand other objects.
In other words, -Isy gives the result of an Analytical Generalization, and -Ity that of an Indeterminate, Spirit-like, or Fapory, Obserfatorlal Generalizatioy, not, therefore, "Positive" or Echosophic, even in the Ordinary or Lower Scientific Sense. (t. 1010-1012.) It is ideas of this class (the ITx s) which Comte intends by Entities ; see Entity.

The Highest and Grandest Subdivisional Distribution of Universal Adjective Property, (The Domaiy therefore of -Ism) is into 1. Tue Good, (it might be Goodism) Unismal ; 2. The Tree, Duismal; and 3. The Benutifel, Trinismal. The Second of these, The True, Duismal, is The Governing or Supreme Attribute ; that to which all others must (in predominance) submit and conform. It is the Logos or God-Principle of the Alstract Attributional Domain. Good and Beautiful are susecptible of Degrees of Comparison, as Better and Best, more Deautiful and most Beautiful; but True has strictly no Degrees of Comparison; Truti no possible enhancement of its own Nature. It is Tife Abstract GoD; the (personally) unrevealed God; the God of conceptual, sclf-existent Justice, (or adjustment), Truth and Law; God the Father of the Final Theology, in a word: The Sciento-Absolute; (see Messianism, Odic Force, Spirit, Absolute.) "Philosophy," says Proudhon (Création de l'Ordre, p. 87) "has never yet essayed to give a Gencral and Transcendental Theory of Abstraction; but, without such theory, certitude respecting the points still controverted in Philosophy [which includes Theology] can never be acquired."

Affection, Love, Tue Good, (Analognes of each other), Unismal, are opposite in Nature to Finowledge, Wisdom, and The True (Analogues of each other), Duismal. Affection is essentially sIDe-Takivg, partial, a respecter of persons, and hence unjust, or not-true, in the abstract Scientic meauing of Justice, Truth and Law. It accords with Idia-phronicism, as Tine True accords with the Koinos Logos, (which see.) Utter Devotion to the governing Behests of the Abstract and Absolute Truth is the sufficient platform, or Basis of the Creed, of the New Religious Dispensation, the Religion of the Future; devotion thence to the Discovery of Truth, and thence again to the discovery or acquisition of the Method which shall conduct to the discovery of Truth.

Devotion to Truth is then The First Postulate; but it may be that we do not know the Truth; there is demanded therefore A Preliminary Devotion to the discovery or the search after Truth; but we may not know now to seek the truth; there is therefore the demand for A Still Preliminary Devotion to the Discovery of $\triangle$ Scientific Metiond, by which we can investigate and determine the Truth universally. Universology purports to be the

Discovery and Demonstration of that Method. It results that the Religious Sentiment of the World shonld, for the present, be concentered on the comprehension, aequisition and criticism of the New Universal Scicuce or Science of the Universe.

But, yet, The Beautiful is the result of graceful compromise between the Sternness of Abstract Truth and the too excessive concessiveness of Affection or Love, and is, therefore, from owe point of view higher and more than Truth, (t. 111\%.) When Goethe affirmed that "Beauty is more than Goodness," the world could not understaud him. In the light of these Principles it is seen in precisely what sense it is more than both Goodness and Truth, since it is a Compound Resultant of the two, and is in that sense more than either of its factors; but in the Governmental or Regulative Sense, it is always the second, Pure Abstract, term in the Trigrade Scale of Prime Elements, which is supreme. Confucius said, "O thut I could find a man who loved Truth as I have seen men love Beauty!" Christ said, "The Zeal of my Father's Iouse lath eaten me up."

To ascend from Personal Love, centered, in the first instance, upon some Ideal or Real Personality however exalted, to Love primarily and directly centered upon that Pure Abstract and Universal Truth which embraces and presides over ull Ileats. and all Personulity, and to the Lore then and thence derived, of Ideals (or Idols) and Persons, ouly, or chiefly, in so far as, and because they embody or incarnate Tue Treth (The Logos), in full, or in parts previously estimated and clearly understood in the Abstract State, and hence intelligently and critically recognized, in its Varying Degrees, in its Personal Representatives; to ascend from this Compound Love to the Wisdoar which comes from the Knovoledge of Truth, and finally, to proceed thence, to that Supreme Gracefulness of Conduct, the High Art of the Individual and Collective Life of Ilumanity ;-to marry, in a word, the burning and absorbing pious zeal of Christ to the Love of Truth per se, so pathetically sighed for by Confucius; to marry these two Loves, conjointly, with the Cleancut and Profound Intellectual Understanding of Truth; Sciento-Philosophic,-such is the more Elaborate Programme of the New Religion propounded by Universology, Integralism and Pantarcmism-New only in the
sense that it is the Superior Development, the Flowering-out of the Religion(s) of the Past; the Realization of all that is or can be truly meant by the looked-for "Second Coming of Christ." See Catholic, Catholic Church, (New, Old,) Theology, God.

The Incarnated Human Excellence, Individual or Collective, which could rightly say, in Scriptural Phrase, but in a new sense and with reference to the Most Profound and Fundamental Abstract Truth, "I and my Father are One," might be proclaimed, without blasphemy, as "The Messiah," "The Anointed One," and as "Immanuel," or "God with us." Of such Transcendent and Divinized Humanity it might be said in a less restricted Personal Sense than of Old, " And The Word, (The Logos) became Flesh, and dwelt among us, (and we beheld his glory, the glory as of the only begotten of the Father), full of Grace and Truth." The "Lyrical Philosophy" (see Mysticism) of the Old Scriptures may thus be interpreted into the more intelligible Human-like experience of the New Age.
The excess of Love is, indeed, not unfrequently the worst enemy of Truth. Even God and Christ, and The Bible, and The Church maybe held to and devotedlyloved, by the best of people, in a certain sacramental way in which these sanctified objects are mere Idols, darkening the understanding, hindering the freedom of the mind and the possibility of Progress, perpetuating bigotry, dogmatism, religious arrogance and other wide-spread ecclesiastical vices.
Professor Huxley, on a recent occasion, rejoices that the -Itys (-Ities) are rapidly disappearing from Science; that, in other words, we are, in this age, contenting ourselves with the Facts of Observation, the -its and -ids, and their Classifications the -ions and -tions (-unz and -shunz). He is quite right, profoundly right, in respect to the proper method in his own really lower and Ordinary, but not less indispensable, Department of Science, which, in order to prosper, must eliminate what does not belong to it; but, there is a certain unconscious arrogance in the assumption, by the champions of the Natural Sciences, in this hour of the triumphant development of their subject, to the effect, that their Science is the only Science, and their scientific method the only scientific method. They have not hitherto fully sensed that Higher Science,
purely Metaphysical and Transcendental (Cardinary, as contrasted with Ordinary) which is to take up and elaborate and classify the -Itys rejected by them, and the still more Transcendental Isms, the Domain of which must speedily come to be recognized as the Supreme Domain of Science. This is Transcendental Science, constructed out of Pure Abstract Ideas, but to which all observations and classifications of mere facts will be found in the end to be subordinate and amenable. Universology is the only umpire which can settle the relative rank of the Special Sciences. At a certain stage in the development of the Fœtus the Liver increases to something like five times its true proportional size, thrusting its immense materioid bulk in the way of claim to being the leading Visceral Organ of the Human Organismus. Perhaps every organ in the body sets up in turn to be the chief of the Physiological Republic, as every one of the Inferior Interests in Society has done, before the Head and Brain are universally conceded their legitimate Governing or Regulative Precedence. It is not, however, till this happens that the Harmonious Perfection of Gestation is accomplished, and the child is prepared to be born. It is by analogy with the Liver that the Natural Sciences have claimed for a period the higher rank in the world of Science, than pure Abstract Scientism, which, as yet, was not in fact sufficiently developed to maintain its claim, more subtle and difficult of realization; somewhat as the Anatomy of the Brain offers the severest and as yet the unsolved problem of Physiology. But the true adjustment of relative rank in the Hierarchy of the Sciences, effected by the demonstration and understanding of the Unity of the Sciences, indicates the hour of Intellectual Birth for the Race, (t. 434.)
A few new terms occur in the Vocabulary not found in the body of this work, but which will serve to facilitate the discussions in question. Of such new terms occurring under the head of $-I s m$, the most are of the Third Order, those Cardinismal terms, pertaining to the Elaborismus of Ideas, the absence of which in our existing languages, emasculates them, for the purposes of ScientoPhilosophy, (c. 3, t. 226), Posita-Negatism for instance. Alwato will furnish less cumbersome and more euphonious terms. These awkward words are provisional. See Integralism, Cardinism, Universology, Univariety.

## ALPIIABETIC ARRAIGEMENT, UNDER -ISM, OF WORDS HAVING THAT EXDING.

(See Introduction to the Vocabulary, $p$. xli.)

## A.

Absolutism; see Arbitrism.
Abstract-Concretism, The Principle embodied in and symbolized by unwrought Materials, Matters, Stuff.
Abstractism, The Principle of Abstractness; see Concretism.
Altruism, devotion to the well-bcing of others, and so to the interests of all; contrasts with Egoism; a larger word than Benevolence and perbaps more specific than Philanthropy; furnishes the adjective Altruistic, which see.-Comte.
Angulism, The Principle in the Constitution and Distribution of All Things, which is embodied in and symbolized by the Angle, or by Angles, the brokenness of Surfaces and Lines.
Animisn, 1. The Principle embodied in and symbolized by the Animal or by the Animal Kingdom at large ; 2. Animal Life as distinguished from Vegetable Life.
Anthropism, The Principle embodied in and symbolized by Man or the Human World. (Gr. Anthropos, Man.)
Anthropomorphism, contrasts with Cosmism, The Principle embodied in and symbolized by the Anthropoid (the Human Figure or

Form) ; the theological doctrine of the Human Form or human-like Being of God; the doctrine respecting God that he is in the human form ; extended by Swedenborg to the Heavens, and Universologically to the Universe, and to each Monad and larger Sphere of Being in the Universe entire. (Gr. Anthropos, Man ; Morphē, Forms.) (c. 1, 2, t. 895.)

Arbitrism, Autocracy, Supreme Personal Authority, or Individual Will; implying Arbitrary and Irresponsible Power and Control, whether of God, or, in a minor degree, of any Ruler or Controller; Considered as a Self-Existent and Eternal Principle; also as presiding in a corresponding Scheme of Government or Administration (characterized by it), in the Universe at large, or in any Minor Domain of Affairs; Self-directing and presiding Will-Power ; in Alwato, YA; contrasts with Logicism, which see.
Artism, the Abstract Principle, or the Spirit of Art.
Arto-Concretism; see Naturo-Concretism, and Concretism.

## C.

Cardinism, The Principle embodied in, and symbolized by, the Cardinismus ; by the Cardinal Series of Number, or by any Cardinal Number or Numbers, (t. 214.) The Hinging and Reconciliation of things different and even most opposite; as of the Most Absolute (Simple) Unity, and of, on the other hand, the most Distinctifted Differ-ence,-reconciled in Univariety or the Omnivariant Unity (The Higher and Complex Unity); as of the Most Implicit Faith in the Underlying Inherency of Truth, Goodness, and Beauty in All Things, the God-Brinciple overruling Evil for Gond, and of, on the other hand, the most rigid Skepticism of every particular Affirmation or Denial (until after Radical Investigation and Con-
firmation)-reconciled in that Plastic and accommodating Mentality which embraces and harmonizes the most Extreme Divergencies; as of the Most Devout Worshipfulness towards The True Divine, whether conceived of as Abstract, or Personal, and of, on the other hand, the Blankest Atheism towards many prevalent literal and degrading Conceptions of the Being and. Nature of God-reconciled in the Sciento-Philosophic and Composite Theology of the New Catholicity of the Future; as of the most Derout SelfAbnegation, Consecration, Loyalty and Subordination to all true and accepted Leaders or Chiefs, the full recognition of " the Divine Right of [True] Kings," and of, on the other hand, the Must Utter Democracy in
the Sovereigity of the Individeal,-reconciled in the Larger Organic and Pantarchal State-craft of the Future of Humanity; as of Conservatism, and of Radicalism, reconciled in Orderly, Rapid, and Omnivariant Progress; as of the Complicated Organization and Static Order of the Prospective Pantarchal Régime of Human Affairs, and the Free Dissentient Individuality which shall persistently decline, like the debris at the foot of a mountain, to be included in any consolidated and organized Establishment whatsoever, etc., etc., etc. But Cardinism is still in Preponderance, Statoid, as contrasted with Ordinism, which is Motoid ; see -Ism, Ordinism, Univariety, God, Theology, Universology, Catholic, Catholic Church, (Old, New, ) Individuality, (Convergent, Divergent.) (Lat. Cardo, s Hivge.)

Determinisis, The Principle embodied in and symbolized by Determination, or a Scheme of Determinations, or adjustments of Lines directed to different Points of the Heavens.
Deutero-Christiantsm, The Dominant Principle of the Deatero- (or Deuto-) Christian Dispensation; see Deutero-, Proto-, TritoCbristian, (a. 49, t. 204.)
Deutero-Religionism, The Governing Principle of the Second and Transitional Religious Stage of Development in Human Society, affecting especially this age; see Dentero-Christian.
Deutero-Societism, The Governing Principle of The Second or Transitional Stage of Development in Human Society, affecting es-

Cardinordinism, (Cardina-Ordinism), the composity and mutual interblending of Cardinism and Ordinism.
Circlisar, The Principle embodied in and symbolized by the Circle.
Concretism, The Principle embodied in and signified by the entire Concrete World.
Conservatism, The Principle which tends to Conservation or the Preservation of whatsoever is; contrasts with Radicalism; see Radicalism and Conservative.
Cosmism, The Principle embodied in, and symbolized by The World apart from Man; (Gr. Cosmos, World) ; see Authropism.
Cube-ism, The Principle embodied in and symbolized by the Cube.
Ctrvism, The Principle involved in and symbolized by Curvature or the Curve.
D.
pecially The Present Age; sec DeuteroChristian.
Dia-Magnetisa, That form or condition of Magnetism, which causes certain substances, when freely suspended, to take an equatorial position, or one at right angles to the lines of magnetic force.
Dualism, The Doctrine that there are two sources or origins of Being; contrasts with Monism.
Duism, One of the Three Fundamental or Primordial Principles of Universology. The Principle in the constitntion of All Things which is derived from, and has relation to, the Number Two; the Spirit of Two; (Latiri Dun, Two); see Unism, and Trinism, and Universology, (t. 203.)
E.

Eclecticisur, The Philosophical Principle or System which elects or selects portions or Aspects of all other Systems, conjoining them into a new or Eclectic System; differs from Integralism which takes substantially the whole of all other Systems, placing and reconciling them and all their parts by virtue of Universological Solutions and Principles.
Egoism, a passionate love of self, leading a man to centre all cousiderations upon his own personality; contrasts with Altruism; see Altruism, under -Ism, and Altruistic.

Elementism, the Principle embodied in and symbolized by Elements, or the Elementary Domain.
Empiricisir, Knowledge, from Experience merely.
Equa-Tnequisyr, The Conjunction, Marriage and Reconciliation, or the Mutual Modinication of Equism and Inequism; which see.
Equisu, The Principle embodied in and represented by The Equal Numbers, by Par-- allel Lines, etc.; related to Equity, in Morals, (t. 898, 906) ; see Inequism.
Experientialisar; see Sensationalism.

## F.

Feminisy, The Principle embodied in, and synbolized by, the Feminismus, or by any Female Being, or the Analoguc of such. (t. 136.)

Fractionisy, The Principle embodied in, and represented by, Fractions, or The Fractional Series of Numbers.
G.

Globisy, The Principle embodied in, and symbolized by, the Globe, (-Figure.)

## H.

Helicism, or Helis, defined, t. 637.

## I.

Idealisy, The Philosophy which evolves all Being from Mind; see Materialism.
Idiaphronecism, The Principle of the Idia Phronèsis; which see.
Inclinism, The Principle embodied in, and symbolized by, the Inclined Line or Plane.
Individialism, The Principle embodied in, and symbolized by, the Individual, as contrasted with the Sociability, Mutuality, or Unity of Society; The Doctrine or Tendency which leans towards, or promulgates, that Principle.
Inequa-Equisu, The Conjunction, Marriage and Reconciliation or the Mutual Modification of Inequism and Equi:m, which see.
Inequisu, The Principie embodied in and represented by The Odd Numbers, by Odd or Un-mated Objects or Forms, etc., related to In-iquity in Morals, (t. 898, 902;) see Equism, and Universology.
Infernalism, The Infernal Principle, the Principle embodied in and symbolized by the Hells.
Inorganism, The Principle embodied in, and represented hy, the Invrganic World.
Istegera-Fractioniss, The Principle symbolized by the Composity and mutual interblending of Whole Numbers and Fractions.
Istegerism, The Principle embodied in, and represented by, Integers or Whole Numbera, or by This Integral Series of Numbers.
Inteorisim, lefined, t. 210.
Islayism, Mahoinetanism.
Inteoralism, I. The Universal Philosoply, (accompanying Universology and Pantar-
chism), Universal in a Multiform Sense, as embodying: 1. Natural Pulosopity, in the Grand or Comtean meaning of the Term, together with its Metaplysical and Theological Substrata, the Speculative, Instinctual and Inspirational Basis, the old Philosophies and the Old Religions; 2. Scr-exto-Philosopiry, the Exactitudes of Universology, generalized, and, 3. Arto-Philosophy, or the New and Future Practical Philosophy, the Final and Harmonious Application of Philosophy to the Collective and the Individual Life of Man-culninating in the Religion of the Future. II. Integralisir, is the convenient abridged enpression fur Omnivariant Iutegralism, and also for Piroto-Integralism (somewhat as Individuality is currently used for Divergent Individuality, Triuism for Treism and Tri-Unism, etc.) In this last sense (see Pivoto-Integralism) it means The Cardinism of Cardinism with Ordinism in Cardinordinism; and of this lest (as Integerism), with Fractionism in Integcra-Fractionism (as of The Sabjective and The Objective antithetically reflecting each otlier), and, finally, of all this, as Positism, with Negatism, (The Soueting and the Nothing, as the Equal Factors of Being) in Omnivariant Intearalism, centered in and representel by Pivoto-Integralism, The Reigning Unit or Individual or Pivot of any Organismus whatsocver. See Cardinism, Ordinism, Cardinordinism, Integrism, Fractionism, Integera-Fractionism, Pivoto-Integralism, and the following Tabular Piesentation, to be read from below upward.

## OMNIVARIANT INTEGRALISM.

INTEGERISM (Unism, Duism, Trinism.)
$\left\{\begin{array}{c} \\ \\ \text { CARDINISII } \\ \text { (THE CARDINAL } \\ \text { NUMBERS.) } \\ \text { ORDINISM } \\ \text { (THE ORDINAL } \\ \text { NUMBERS.) } \\ \end{array}\right.$ (ALL POSITIVE Numbers.)

## PIVOTO-INTEGRALISM, (THE UNIT.) <br> fractionism (The Fractions.)

NEGATISM, $=$ ZEROISM (ZERO.)
J.

Judarsm, The Religious System of the Jews.
K.

Kornologicrsu, The Principle of the Koinos Logos; which see.

> L.

Lins-ism, The Principle symbolized by The Line or Lines.
Linism; see Line-ism.
Loaicarbitrism, (Logica-Arbitrism), The Composity and Interblending of Logicism and Arbitrism.
Logicisne, Pure and Transcendental RationAIISM ; Rationalism rigorously confined and applied to the Inherent and Necessary Laws of Being ; the Logos of Plato and St.

John (translated "The Word," Gospel of John, ch. 1, v. 1), considered as a SelfExistent and Eternal Principle; also as presiding in a corresponding Scheme of Government or Administration characterized by it, in the Universe at large, or in any Minor Domain of Affuirs; Wisdom; the Pure Reason; in Alwato, WO; contrasts with Arbitrism; which see.
M.

Masculisu, The Principle embodied in and symbolized by the Masculismus, or by any Male Being, or any Analogue of such.

Materialisw, The Philosophy which evolves all Being, Mind and Idea included, from Matter.

Materism, The Principle embodied in, and symbolized by, Matter, or the Materiismus. Maximisar, The Principle embodied in, and symbolized by, Maxima, The Greatest, or that(those things) which is (or are) Greatest.
Mentism, The Principle embodied in and symbolized by Mind, or the Mentismus.
Mrnerism, (or Mineralism), The Principle embodied in, and symbolized by the Mineral, or the Mineral Kingdom at large; the relative deadness or absence of life of the Inorganic as contrasted with the Organic world.
Mnimisur, The Principle embodied in, and symbolized by, Minima, The Least, or that (or those things) which is (or are) smallest.
Modulism, The Principle of Graceful Va-
riation in Form; the Principle illustrated by Hogarth's Line of Beauty.
Monism; defined, e. 1, t. 756.
Monothersm, One-single-God-ism; (Gr. Móonos, Sole, Sinale; Theos, God.)
Motism, The Principle embodied in, and symbolized by, Motion.
Morormisy, 'The Principle of a state of being analogous with motion.
Mrsticisy, Doctrines intuitionally conceived and unsystematically expounded, so as to be mysterious or partially incomprehensible, called by Wechniakoff, "Lyrical Philosophy," and defined as "the special mode of philosophizing à propos of subjects which escape from a rigorous scientific comprehension."
N.

Naturism, The Principle embodied in, and symbolized by, Nature ; crude, imperfect, aggregative; analogous with Affection, Natural Tendency, or "Human Nature," in respect to the Mind; the Abstract Principle, or the Spirit, of Nature; see Nature.
Naturo-Abstractism; see Abstract-Concretism.
Negatism, The Principle embodied in, and
symbolized by, Zero, as contrasted witl All Positive Numbers, = Nothing; see Zeroism, Positism.
Nibilism, The philosophical doctrine which reduces everything to non-entity.
Nonsubstantialism; see Nihilism.
Numerism, The Principle embodied, in and symbolized by, Number.
Nuptialism, The Principle embodied in, and symbolized by, Marriage.
0.

Opminsm, 1. The Doctrine that every thing in Nature is arranged for the best; 2. That in Heaven supreme and unalloyed good will be fully realized; see Pessimism.
Ordinism, The Principle embodied in, and symbolized by, the Ordinal Series of Num-
bers; that which reigns in the Ordinismus; see under-Ismus, (t. 155, 214.)
Organism, properly the Principle indwelling within any Organismus, (c. 4, t. 43.)
Ovism, The Principle symbolized by the Egg, and especially by the Egg-Figure or -Shape.

## P.

Pantheism, The Doctrinc that the Universe is God; or that God exists only in the Universe as its indwelling Spirit and Power, (Gr. Pan, All ; Theos, God.)
Pantophronedism, The Composity and Harmony of Idiaphronicism and Koinologicism.
Partialism, one-sided doctrine or view; see Siuplism.

Particolism, The Principle embodied in, and symbolized by, the least Particles or Atoms of Being.
Partism, The Principle embodied in, and symbolized by, the Parts of the Integer or Whole.
Perpendiculism, The Principle embodied in, and represented by, the Perpendicular Line or Direction.

Pessimasu, 1. The Doctrine or Opinion that every thing in the World is bad, or the worst that can be; 2. Thatin Hell Supreme and Unalloyed Evil and Suffering exist; see Optimism.
Fhilosophisy, The Principle embodied in and symiouized by Philosophy.
Pivoto-Integralism, The Principle embodied in, and symbolized by, the Numerical Integer, or Unit, considered, on the one hand, as the Summation of an Infinity of its own Component Fractions, beneath (or of lower value than) and witery itself, and, on the other hand, as the Primitive Monad or Central Atom above which arises an Infinite Series of Integers or Whole Numbers, higher (in value than), outside of, and beyond this Primitive Integer, whence therefore, it is Pivotal, or fills a cardinating or hinge-wise function between an Internal Universe of Fractional Numbers and their Relations and a similar External Universe of Whole Numbers (t. 841, 842), these two Universes standing apex to apex, in Antithetical Reflection to each other, (t. 382.) The Point repeats the Unit; the Atom repeats the Point; The Individual Man repeats the Atom. Each person is thus Piroto-Integral, or cardinated between The Universe without and an answering Universe withinAntithetically Reflecting each other. So of the Atom. Hence arise important Analogical relations with Microscopy, "Pangenesis," "Homeopathic Attenuations," (t. 1078), etc.; see Universology.

Picracism, The Principle of the Pluralismus.
Polytheisu, The Belief in a Plurality of Gods. (Gr. Pollus, Many; Theos, God.)
Posita-Negatism, The composity and cardinated reconciliation of Positism and Negatism, which see.
Positism, The Principle embodied in, and symbolized by, all Positive Numbers as contrasted with Zero $=$ Nothing.
Positivism, The name chosen by Auguste Comte for his system of Philosophy and Religion, founded on Positive Science.
Presentationism; see Real Presentationism.
Prinism, The Orclinal aspect of Unism.
Proto-Christianism, The Governing Principle of the First Christian Dispensation; -Affectional, related to "Feeling," in Metaphysics. (Gr. Protos, First); see Deu-tero-, Proto-, Trito-, Christian.
Proto-Religionism, The Governing Principle of the First or Primitive Religious Development of Human Society ; see ProtoChristianism.
Proto-Societisy, The Governing Principle of The First or Primitive Grand Development of Society, extending up to The Present Age; see Proto-Christianism.
Ponctism, The Principle symbolized by Point or Points.
Pyramidism, The Principle embodied in, and symbolized by, the Pyramid or Pyramidal Form.

## Q.

Quartism ; see Unism.
Quminism; see Unism.

## R.

Radicalism, The Principle embodied in, and symbolized by, Root or Roots; thoroughness; that which goes to the bottom of things; destructive, subversive; see Conservatism.
Rationalisy, The doctrine in Religion, and elsewhere, which subordinates Faith to Reason; which reduces every belief to a rational basis, and rejects what cannot be so resolved.
Realism, The Philosophical Doctrine which accepts the testimony of the senses in respect to the External World, as reliable.

Real Presentationism, The doctrine that in perceiving the external world, the mind and the object perceived are in actual presence, or unite without the interrention of any filmy representative idea, ( $t$. 415-419.)
Rectilinism, The Principle embodied in and symbolized by the Right Line; see Rectism.
Rectisy, The Principle involved in and symbolized by Straightness.
Rotundisy, The Principle embodied in and symbolized by Roundness.

## S.

Scientism, the $\Lambda$ bstract Principle or thas Spirit of Science; The Principle embodied iu, and symbolized by, Science.

- Sciento-Abstractism; see Abstractisin.

Secondism, the Ordinal Aspect of Duism.
Sectoriss, The Principle embodied in, and represented by, the division of a circle called a Scetor.
Segmentisy, The Principle embodied in, and represented by, the section of a circle called a Seginent.
Sevsationalism, The Philosophical Doctrine which refers all Knowledge to Sensation; related to Materialism and Experientialism; contrasts with Idealism and Transcendentalism.
Seszuism, An Intermediate Carlinating Principle between Uniem and Deism, (Lat. sesqui, one and a half.)
Simplism, the simplistic aspect of any subject, onc-sidedness, insufficiency of view; a state of mind corresponding with such a view, (t. 436.)
Singlisy; sec Singulisin.
Envalism, the Principle of the Singulismus; a gross and gencral espect of Unism ; contrasted with Pluralism, as Unisın with Duism.
Solidism, an arrangement of solid matter, as of the volume or tome; see Surfacisin; The Principlo symbolized by Solid or Solicls.
Spiralism or Spiral, defined, t. 637.
Spa ci-Tempisi, the composity and mutual interblending of The Principle symbolized by Space and that symbolized by Time.
Spiritism, The Doctrine which resolves Spirit into Attenuated Matter.
Spiritualism, The Doctrine which makes Spirit to be a something distinct from Miatter, (t. 61.)
Square ism, The Principle embodied in, and symbolized by, the Square.

Stata-Motism, the composity and mutual interblending of Statism and Motism.
Statism, The Principle of Station or Rest; the Spirit of the Statisınus; see -Ismus.
Sub-stan-ce-ism, The Principle einbodied in, and symbolized by, Substance as contrasted with Morphism, the Abstract Principle of Form.
Subtra'scendentalism, Transcendentalism in the senso of Uitria-rarlicalism, Ultranalysis in the downward or root-wise direction, sceking Absolute Scientific Foundations. See Ultranalytical, Transeendental.
Superfalism, The Celestial Principle; (Lat. Supernus, above.)
Surfacias, The Principle embodied in, and symboiizaci by, Surface; an arrangement of surfaces, as of pages and leaves in a book; properly, Surfuccation, (t. 023.)
Syllogism, a form of reasoning, or argument, consisting of three propositions, of which the two first are called the premises, and the last the conclusion. In this argument, the conclusion necessarily follows from the premises; so that if the two fir-t prepositions are truc, the conclusion must be true, and the argument amounts to demonstration. Thus, A plant has not the fower of locomotion ; An oak is a plant;
Therefore an ouk has not the power of locomotion.
These propositions are denominated the major, the minor, and the conclusion. (Gr. sun, with, and lego, то sreak; logizomai, to tilink.
(Webster.)
Symbolism, The Principle involved in the use of Symbols, or figurative sigus; Tho Principle of Tree-Masonry, characterized as the Tastinctual stage of tie Peligion of Science, aud of the Scienle of Morale, (t. 905.)

## T.

Tempism, The Principle symbolized by Time. Terthesm, The Ordinal Aspect of Trinism.
Tran: cendentalism, in Philosoplyy and in Science; the assumption of a higher, and more ideal, and consequently of a more cxtended and conspectunl point of view,
from which to look down upon the facts; that form of Speculation which achieves or professes to achieve this. "The Higher Jaw," transcending the "Fisst Blush" or Ordinary Style of Opinion. In Science, it is that character of Scielice whieh is logi-
cally deduced from a priori and necessary Principles; which does not, therefore, rest on the mere accumulation and classifcation of Observed Facts. In America "The Constitutional Lawyer," who reasons from the Established Principles of the Constitution, aud from the Higher Law of the General Government as overruling all adverse Special Statutory Law, and State Laws in conflict with the Constitution, illustrates, in the domain of jurisprudence, the idea of Transcendentalism in Philosophy and Science. (Lat. trans, over, beyoND; scando, to MOUNT, TO GET UP.)
Treiss, the minor aspect of Trinism, in which it is contrasted with and excludes Unisar and Duism.
Tre-Unisa; see Tri-Unism.
Trinism, One of the Three Fundamental or Primordial Principles of Universology. The Principle in the Constitution of All Things which is derived from, and has relation to, the Number Three; The Spirit of Three; (Lat. Tres, Three); see Unisy and Dursm; t. 203 ; the indifferent or inclusive term for Treism and Tri-unism; see Treism, 'Tri-unism, and Trinisma.

Trito-Christanism, The Dominant Principle of The 'lritu-C'uristianismus; the Partial Re::ction from Crude Rationalism, soon to come in the Future ; The Harmony to result from the reconciliation of Faith and Reason. See Proto-, Deutero-, Trito-Christian.
Teito Religionism, The Principle to reign in the Religious Constitution of Society in The Harmonic Future; The New Catholicism; see Proto-, Deutero.
Trito-Eocietism, High Social Harmony ; The Governing Principle of The Third or Ultcrior Stage of the Development of Human Society, to result from the Marriage of Science and Religion; see Proto-, Deu-tero-.
Tri-Unsos, The Congeriated or Univariant Unity of Unism, De:sms, and Trinism, as if they were inerely branches of this one Higher and Compound Principle; the composite aspect of Trinism, as resting upon the abstract principles, Cnisy and Deism, subsuming and including them, as aspects merely of its own larger Unity; see Treism and Trinism, (t. 203.)

## U.

Unism, One of the Three Fundamental or Primordial Principles of Universology. See Deism and Trinism. The Principle in the Constitution of all Things which is derived from, and has relation to, the Number One; The Spirit of One; (Latin Tnus, One), as Duism from Latin Duo, Two, and Trinism from Jatin Tres, Three. Quartism, Quintism, Hexism and Heptism (or Septism) are other and secondary Principles in the Universal Order of Evolution, related to the Numbers, Four, (Latin Qua-
tuor), Five, (Latin Quinque), Six, (Greek Hex), and Seven, (Greck Hepta, Latin Septem), respectively, less basic, simple and inclusive than the three first named, ( t . 203.)

Unipunctism, Onc-Point-ism, The Principle symbolized by the Single Point.
Universism, The Principle embodied in and symbolized by the Totality of the Universe; The composity and interblending of Cosmism and Anthropism.

## W.

Wedgism, The Principle of the WedreMechanical ; a compound instance merely of Inclinism, to which one Aspect of Form and Posture Universolngy reduces, by Ultranalysis, all the Mechanical Povers, The Lever, the Inclined Plane, the Werlge, ete. It (Inclinism) is the Antithet of Proto-
dimensionality which consists of Levels and The Perpendienlar; it is synonymous, therefore, with Interprodimensionality. It is related to n as contrasted to o (see Unirersology under -Ology), and hence to Morement.

## - RÉsuMÉ and RESTATEMENT,

In part, of the Technical Terms occurring in this Volume, ending in -ISM, re-arranged under the Heads of UNISM, DUISM, and

TRINISM, respectively. (Trinismal Ideas are a
Summation and higher Resultant of UNISM and DUISM.)


Note:-For a condensed Abstract and Re-Statement of The Consummation of these Tiirrade Scales of Idea, see the following page (lxvi.)

# FINAL RÉSUMÉ OF RELATED IDEAS. (See p. lxv.) 

## 1. <br> TEMPIC SUBDIVISION.

1. Unismal.

THE PAST.
(ANTIQUITY.) (MODERN OR RECENT TLMES.)
THE PRPESENT.
3. Trinismal.

THE FUTHRE.
2.

SPACIC SUBDIVISION.

1. Unismal.

REMOTENESS.
2. Duismal.
3. Trinismal. PROXIMITY. THE NEW DEPARTURE.
3.
(Pivoto-) Tri-Unismal.
SPACI-TEMPIC CONJUNCTION;
INSTANTMALETY—冝HE VEVID HNSTANTE;
the present age;
THE GRAND CRISIS.
HERE AND NOW.

## -ISMAL.

-Ibmal, The Adjective Termination from denoted by the corresponding ending -Ism. the Substantive Termination-Ism; that which (c. 1-14, t. 43) ; see-Ism. concerns or relates to the Abstract Principle

Alphabetic Arrangement, under -Ismal, of Words ending in -Ismal.
A.

Avalytismal, relating to Analysis as the Arbitrismal, relating to Arbitrism; (which) higher branch of Mathematics and its Analogues; and to Analysis generally. Artismal, relating to Artism; sce-Ism.

> C.

Cardinismal, relating to Cardinism; see -Ism.

## D.

Dursmal, relating to the Principle of Duism; see -Ism.

## E.

Equisyar, relating to Equism; see -Ism; Eien, Just, True; relating to Moral and and to Mathematical Equation; see InConmercial Equity, to the Even Numbers, equismal.
F.

Feminismal, relating to Feminism; see -Ism.

## I.

Inequismal, relating to Inequism; see-Ism; Old, Enever, not True; related to Inequity, (Iniquity), moral or commer-
cial ; to the Odd Numbers, and to Mathematical Ratio or Proportion; see Equismal.
L.

Linisacal, relating to Liniism; see Ism.
Logicismal, relating to Logicism; see-Ism.

## M.

Mascclismal, relating to Masculism; see Mentismal, relating to Mentism; see-Isy. -Ism. Morphismal, relating to Morphism, the Materismal, relating to Materiism; see Principle of Form.
-Ism.
N .
Natcrismal, relating to Naturism; see-Ism. Nemerisyal, relating to Numerism; see-Izy.

## O.

Organisyal, relating to Organism as a Principle ; see -Ism.

## S.

Scientismal, relating to Scientism; see-Ism.
T.

Trinismal, relating to the Principle of Trintsa; see-Ism.

## U.

Cnismal, relating to the Principle of Cnism; sce-Ism.
$\nabla$.
Viscerismal, relating to Viscerism ; seo-Ism.

## lxviii

## VOCABULARY.

## -ISMIC.

-Ismio, a Termination or Ending derived -Ismal, and c. 1-14, t. 43; relating to the from -Ismus, and which holds the same re- Realm or Domain named by the stem of the lation to it that -Isyral holds to -Ism; see word.

## Alphabetio Arrangenent, dnder -Ismic, of Words ending in -Ismic.

## A.

Artismo, (adj.), relating to the Artismus, or the Domain governed by Artism; see -Ismcs.

## C.

Cardrnismo, relating to the Cardinismus, or the Domain governed by Cardinism; see -Ismus.
D.

Duismio, relating to the Duismus, or the Domain governed by Duism; see -Ismes.

$$
\mathrm{N} .
$$

Natcrisurc, relating to the Naturismus, or the Domain governed by Naturism; see -Isarts.

## O.

Organismo, relating to any Organismus or Organized Domain; see -Ismus.
S.

Soientismo, relating to the Scientismus, or the Domain governed by Scientism; see -Ismus.

## T.

Trinisnce, relating to the Trinismus or the Domain governed by Trinism; see -ismus.
U.

Unismo, relating to the Unismus or the Domain geverned by Unism; see -Ismos.

## V.

Viscerismo, relating to the visceral Domain, the Viscerismus ; see -Ismus.

## -ISMUS (plural -ISMI.)

-Isyus, a Termination or Ending which denotes a Realm or Domain of the kind indicated by the Stem of the Word, and within or over which Domain presides the corresponding Principle signified by the termi-
nation-Ism applied to the same Word-Stem. (c. 1-14, t. 43.) A term in -Ismal, -lsmic or -Ismus may be formed, in every case, from the corresponding term in -iss.

## alpilabetic arrangement, under -ISMIUS, OF TFORDS HAviyg THAT ENDING.

A.

Abstract-Concretishos, The Domain of the Abstract-Concrete Sciences, Spencer.
Abstractismes, The Abstract; The Domain of Abstract Ideas; contrasts with Concretisinus; see Abstract, The.
Adjectivismus, The Domain of Adjectives, Predicates, or Attributes, in Grammar, and of those Aspects, Reflects or Phenomena, in Nature, which are analogous therewith; see Substantivismus.
Adclutismes, The Adult Age as of the In-
dividual or of Society, with the whole assemblage of related facts and conditious.
Analogicismes, The Domain of Analogic.
Arbitriscres, The Domain of Affuirs in which Arbitrisin prevails; allied with The ProtoSocietismus; see Arbitrism under -Ism, and Proto-Societismus, under -lsmes.
Aptismes, The Domain of Artism, allied with The Trito-Socictismus; see Artism under -Iss.

## C.

Cardinisurus, any hinge-wise apparatus whatever; The Domain of Cardinality, or, especially, The Grand Hing -wise Arrangement of the Four Carlinal Points, (plus the Zenith and Nadir), in the Grand Stationary Globe, or under The Grand Stationary Dome of Space ; contrasts with Ordinismus ; relates to "Extension" and Solidarity, as the Ordinismus to Protension

Catalogicismus, The Domain of Catalogic.
Conditionismus, The Domain of Conditions or Limitations; The Conditioned, contrasted with the Unconditioned.
Concretismes, The Concrete World; The Domain of Concretism; or of The Conerete Sciences, Spencer; see Coucretism, under -Ism.

## D.

Determinismis, The Determinate Domain within any Domain; as of "Definite Proportions" in Chemistry ; (t. 332); see Indeterminismus.
Devtíer)o-Christianisycs; sce Deutero-Societism and Deutero-Christianism, under -Ism.
Delt(er)o-Religionismes; see Deutero-Societismus and Deutero-Religionism, under -Ism.
Deut(er)o-Societismes The Second, or Scientic (Grand) Stage or Period of the Development of Collective IIumanity or Society; Short; Transitional ; The Present Age; The Duismus, Secondismus, or Scient:smus
of Socicty, Critical, Destructive, but incipiently Reconstructive ; see Proto-, Deu-tero-, Trito-Societism; (t. 423.)
Duismes, The Domain of Differentiations and Interrelationships; the Nit-work of Laws and Relations underlying the external mass of Objects, Facts, and Phenomena, in all Spheres of Being; that Realm or Domain in the Constitution of Being, whether of the Universe at large, or of any minor department or Sphere, or of any single object or idea whatsoever, in which The Principle of Dism coverns, predominates, or especially abounds; see Duism, under -ISs.

## E.

Elaborismos, The higher, and more properly constituted Department of any Organismus, as the Etymology and Syntax of Grammar or Language, contrasted with the Lower Domain (subtranscendental, scientifically the Higher Domain) of Phonetic Elements ; see Elementismus.
Elementisurs, The lower Analytical and Elementary Domain of any Organismus, as
the Phonetic Elements, by Analysis, of Language ; see Elaborismus.
Equisurs, The Domain of ideas and objects, or things Equaled, made Equal, Level, or Even, with each other, or with some object with which they are mutually compared; symbolized by the Even Ntabers in the Numerical Series (t. 703) ; see Inequismus, Equismal, Inequismal.

## F.

Feminismus, The Domain of Female Beings, and of their Analogues in the Inorganio World, and in Ideal Spheres.
Fractionismes, The Domain of the Fractions $m$ Numerical Series and of all the Interior
and Subjective Conditions and Relations of Being, analogous with Fractions within the Body of the Unit ; contrasts with Integerismus. See Fractionism, under -Ism, and Subjectivismus, under -Isyus.

## I.

Indeterifintsurs, The Indeterminate Domain within any Domain, as that of Amalgams and Mixtures in Chemistry; (t. 332.) See Determinismus.
Inequismus, The Domain of ideas and objects or thinges which are Single or Singular ; Odd, Eccentric or Unpaired; Individual or Enrelaterl, symbolized by the Odd Numbers in the Numerical Series, (t. 703); see Equismus, Equismal, Inequismal.
In-organismes, The Domain of Unorganized Tinings, The Inorganic World and its Analognes in major and minor domains; see Organismus.

Integerismes, The Domain of the Integers or Whole Numbers in Number, and of all Exterior and Objective Conditions and Relations of Being analogous with the Relations of the Unit with other Units in a sum of Integers; contrasts with Fractionismus. See Integerism, under -Isar, and Objectivismus, under -Isyus.
Integralisurus, The Domain of Integrality, allied with lntegerism, but including also Piroto-Integralism, and in Subdominance Fractionism, as the Whole includes the Parts. See Integralism, under -Ism.

## I.

Innisacs, That department of Form which is constituted of Lines; see Punctismus.

Logicishets, The Domain of Affairs in which Logicism prevails; see Logicism, under -Isy.

## M.

Masculiswes, The Domain of Male Beings, and of their Analogues in the Inorganic World and in Ideal Spheres.
Materisics, The Domain of Matter.

## Mentisures, The Domain of Mind.

Morpmisurcs, The Domain of Form; contrasts with Substan-ce-ismus (or Substanciismus). Motismes, The Domain of Motion.

## N .

Naturismes, The Domain of Nature; the Kealm or Domain oi Being in which Nature or Naturism prevails; the Crude Undeveloped, Primitive Condition of Being, and
the portions of Being which are in such Conditious; see Naturism, under -Isy. Numerismus, The Domain of Number.

## O.

Objectivismos, The Objective Domain of Being; Exterior Outward-lying, counterparting the world within (the Mind) ; see Subjectivismus and Integerismus.
Ordinismus, any concatenated or chain-like apparatus; The Domain of Periodicity and Erentuation in Time; the Continuity and Suecession of Phenomena; stages of development, epochs, eras, dispensations, dynasties, generations of men; and new Creations of all sorts in the Universe at large and in special Spheres; contrasts with

The Cardinismus ; relates to Protension and "Continuity" as the Cardinismus to Extension and "Solidarity," (t. 670, 671.)
Organismus, The Domain of Organized Beings; The Organic World, aud its Analogues in Major or Ninor Domains ; any Being or Apparatus of Life organized in mutual dependence and co-operation of parts (ordinarily called heretofore, in English, an Organism). (Lat. organum, Gr. organon, an Organ, with the termination -Ismus for Domain.)

## P.

Pleralishes, a Domain in which Plurality or Diversity prevails.
Paeualatismes, The Spirit-World; The Domain of Spirits in the Universe at large, or the Analogous Part of any Smuller Domain. (Gr. Pheuma, Spirit.)
Prinalisaus, The Domain of Incipiency or Primals; see Ultimatismus.
Prinismus, The Domain of Primism; see Primism, under -Ism.
Proto-Christianismus; see Proto-Societismus, under -lsmus, and Proto-Christianism, under -Ism.
Proto-Religionisnus; see Proto-Societis-
mus, under -Ismus, and Proto-Religionism, under -Ism.
Proto-Societismus, The First, Crude (Grand) Stage or Period of the Derelopinent of Collective Humanity or Society, extending from the Beginning up to The Present age; The Unismus, Primismus, or Naturismes

- of Society ; predominantly under the government of Physical Force. See Proto-, Deutero-, Trito-Socictism, (t. 428.)
Punctisarcs, The Lowest Department of Form, constituted from mere Points; see Index.


## S.

Scientismus, The Scientific Domain; The Domain of Scientism ; any Spluere in which Exactitudes, Equations, and Rectism prevail; as among Crystals in the Mineral World. See Scientism, under -lsm.
Singulismus, The Domain in which Singleness or Unity previals.
Statisyus, The Domain of Station, Quiescence, or Rest.
Subjectivismes. The World within the Mind; see Objectivismus, and Fractionismus.

Sub-Naturisires, that which is bencath and beyond the Naturismus; Mcta-physical; (Lat. sub, under.)
Substan-ce-ismus, Tile Domain of Substance ; contrasis with Morphismus.
Substantisues, The Domain of Things or Real Objects, to which the term Substautive applies in Grammar, or ;
Substantivisares, The Domain of Substantives, the Grammatical Names of Objects or Things; see Adjectivismus.

## T.

Tecentsmes, The Domain of Technical Trito-Christianisuds, see Trito-SocietisTermis.
Tertishus, The Domain of Tertiism; see Tertiism, under -Iss.
Trinisucs, The Domain of Composity, Elaborations, and Completeness; of Art, Gracefulness, and Grace; that Realm or Domain in the constitution of Being, whether of the Universe at large, or of any minor department or sphere, or of any single object or idea whatsoever, in which The Principle of Terinism governs, predominates or abounds; see Trintisi, under-Ism. mus, and 'T'ritu-Christianism, under -Ism.
Trito-Religionismus; see Trito-Societismus, and Trito-Religiouism, under-Isar.
Trito-Societisucs, The Tiiird, Fiual, or U1terior and Perfected (Grand) Stage or Period of the Development of Collective Humanity or Society, leginning with the Present Age and extending into the Future. The Trinismus, Tertiismus, or Artismos of Society; The Age of Graciousness, Gracefulness, and Grace. See Proto-, Deutero-, Trito-Societism. (t. 426.)

## U.

Ultimatismus, The Domain of Finalities or Ultimates; see Primalismus.
Unismes, The Domain of the Unit or of Units, (Ubjects, Facts, and Phenomena); as the Entities, apart from the Element of Relation, of which any Organismus is composed; p. 485, 487; that Realm or Domain
in the constitution of Being, whether of the Universe at large, or of any minor departnent or sphere, or of any single object or idea whatsoever, in which The Principle of Unism gorems, predominates, or especially abounds; see Unism, under -Ism, (t. 761-766.)

## V.

Viscrerismes, The Domain of the Viscera, or of the Principle of Viscerism, or of Iuterior

Vitality, of The Vitals; see Viscerism, under-Iss.

## J.

Judatsy, see -Ism.

## K.

Kalungee, Term applied by the Hindoos to the expected future and final incarnation of Vishnu.
Kantean, relating to the Philosophy of Kaut.

Kex, a figured notation to indicate a particular division or department of Science or of Affairs.
Know, to, (in an especial seuse, as related to the Intellect, and its perfect demonstrations;) To cognize exactly or demonstratively.

## L.

La Morale, Comte; Ethics and Antiropology.

Language, The New Universal Scientific; see Alwato, Tikiwa, -lsy, Universology, and Index, words Language, Alwato, Tikiwa.

Law of the Series, the Grand Law of Universal Classification and Distribution; Loi Sériaire, Fourier; Loi Sérielle, Yroudhon.

Law(s), 1. An arbitrary edict from any authority competent to enforee obedience, as the Law s of a Country, or, even, the Laws of God as understood in Arbitrismal Theology. 2. Generalizations from Induction, or the Rational and Formulized general Inferences from observed Facts; as the "Laws of Nature," or Laws in the meaning of the Physicists; 3. The Necessary and Universal Regulative Conditions of Being; The Formulized Expressions of The General Instances of The INherent Necessity underlying all Being. This is the highest or Transcendental meaning of the term Law; (as herein established.)

Levities, light things.
Limitation, intervening Line, Limit, or Relation.
Linea-Basic, that which lies or rests upon a Line as basis or foundation.

Lineation, the drawing or making of lines; an arrangement or congeries of lines.

Line-ism; see -Ism.
Lingual, (adj.), related to Tongue, Lan-
guage, or Speech. (Latin Lingua, Tru Tonaue.)

Linism; see-Isy.
Linismal; see-Ismal.
Linismus; sec -Ismus.
Logical Order, the Order of Procedure from Science to Nature, from Man to the World, from Keflection to Sensation, from Head and Chest to Pelvis and Feet, from Within to Withont, from Truths or Principles and Laws to Facts or Phenomena.

Logicarbitrisa; see-Isy.
Logicism; see -Ism.
Logicismal; see -lsmal.
Logicismology; see-Ology.
Logicismus; see-Ismes.
Logos, the Greek word translated 'Word' in the 1st chapter of John's Gospel; the spoken word or discourse, and also Reason as underlying and being the soul of speech; see Logicism, under -Isy.
-Logy; see-Ology.
"Love," as used by Swedenborg, is the whole Attractional and Repulsional Sphere of the Mind; hence it includes its Opposite, Hatred or Hate: equal substantially to the "Feeling" of the Metapliysicians, and the "Affection" of Comte ; contrasted with Wisdom, the "Knowing"-Department of Mind, the two uniting in "Operation" $=$ Conation. See Wisdom.
M.
$M_{\triangle C R O C O S M}$, the Great world; the outer and general world. (Gr. Makros, Great ; Cosmos, World). See Mierocosm.
Macro-Cosmolooy; see-Ology.
Macro-Mineralogy; see-Ology.
Macro-Physiology; see-Ology.
Masculisar ; see -Isy.
Mascllismal ; see-Ismal.
Masculismus; see-Isaus.
Masculoid ; see -Ord.
Masculoidal ; see -Oid.
Massology; see-Ology.
Materialism; see -Ism.
Maternisy ; see-Ism.
Materishal; see-Ismal.
Materismus; see-Ismus.
Materioid; see-Oid.
Materiology ; see-Ology.

Mathematico-Logical, exact; The exactitude of Mathematics rests on a Logical Basis lower, and more fundamental, than mere Number.

Mathests, (Greek), learuing, particularly Mathematics ; used by Oken, for the entire Mathematical Domain.

Matrix, the womb; any container; the medium in which anything is contained and from which it derives its support.

Matteroid; see -Oid.
Maxima, (Latin, pl. of maximum), the highest or supreme numbers or things.

Maximal, that which relates to what is greatest, or most.

Maximism; see -Jsm.
Maximux, (Latin), highest point, largest amount.

Me, I, myself, contrasted with Not-me, as The Subject with The Object.

Mechanology; see -Ology.
Mediar Line, (Medianism), of the Human Body; the line which would cut the body into two equal halves on the right and left.

Medium, (Latin, pl. Mediums, or less appropriately in English Media;) an intermediate or interposed object or personal communicator.
Mentation, the use of the mind in any of it: functions, Thinking, Feeling or Knowing; any operation whatsoever of the mind, whether Intellectual or Emotional, or of the Will or Desire. We have been heretofore without any word having this necessary largeness of meaning, every word relating to the operations of the mind being confined to some one department of the mind.
Mentism; see -Ism.
Mentisyal; see -Ismal.
Mentisaus; see-1sarus.
Mentoid; see -Oid.
Mentology; see-Ology.
Mesotes, (Greek), the Golden Mean,-Socrates.
Mesothet, whatever is interposited and mediatorial ; what comes between. (Gr. mesos, middle, and tithemi, то pot.)

Messianism, the Philosoply of Hoëné Wronski, "The Absolute Reform of Human Knowledge;" the general doctrine of a Supreme Representative Man, to come in some age and reign as a God over all Human Affairs.
Metacarpus, the part of the skeleton of the hand comprised between the carpus and the fingers.
Metaphysio; see Index, word Metaphysics.
Metaphysico-Numerical, relating to the Metaphysics of Number or of the Mathematics; Logico-Mathematical.

Meteorology ; see-Ology.
Method, a term applied, in respect to Science, to the special mode in which scientific truth is discovered or investigated; contrasted with the System of Truth itself, which is The Science.
Microcosm, The Little world, the world within the Individual. (Gr. Mikros, small; Cosmos, World.) See Macrocosm.
Micro-Cosmology; see-Ology.
Micro-Mineralogy; see -Ology.
Micro-Phystology; see-Ology.
Mieton, defined, a. 20, t. 204.

Millennium, literally a thousand years; the age of final Harmony in human affairs, or the trinsitional period to that age. (Lat. mille, a Thousand, and annus, a Year.)

Mineralism; see -Ism.
Minerism; see-Ism.
Minim, the least quantity, a standard of least measurement.

Minima, (Latin, pl. of Minimum), the lowest or least numbers or things.

Minimal, that which relates to what is least. Minimisar ; see-Ism.
Minimum, (Latin), least point, least amount.
Minitude, small quantity, contrasts with magnitude.

Minus, (Latin), less, less than; with the subtraction of.

Minus Quantur, the lesser or inferior quantity.

Mnemosyne, in Greek Mythology, the Goddess of Memory, and Mother of the Muses.

Modicum, (Latin), a moderate quantity, a small proportion.

Modulated, slightly moulded.
Modulism; see-Ism.
Monad, au ultimate atom or point. Each such atom or point is held by Leibnitz to contain all possibilities and attributes; God himself to be merely the most devcloped Monad ; (Gr. Monas.)
Monanthropology; see-Ology.
Monas, (Greek), The Oneness, defined, a. 23, t. 204.

Monism ; see-Ism.
Monocrematic, relating to the one thing.
Monocrematology; see-Ology.
Monogamy, marriage of One with One.
Monogram, a treatise on a single subject or branch of a subject. (Gr. monos, sole or single; gramma, a Writing.)
Monospheric, relating to the Single Domain or Sphere; not to the Relationship or Comparison between Spheres.

Monospherology; see-Ology.
Monotheism; see -Isw.
Morphic, relating to Form. (Gr. Morphè, Form.)

Morphismal ; see -Ismal.
Morphismus; see -Isyus.
Morphoid ; see -Uid.
Morphology; see-Ology.
Motic, that which refers to Movement; see Static.

Notisy; see -Ism.

Motisyrs ; see -Isarcs.
Moto-Concretology ; see-Ology.
Motoid ; see -Uid.
Motordism ; see -Isar.
Motology ; see-Ology.
Mundane, sublunary; pertaining to this nether world. (Latin mundus, the World.)
Mcxditis, (Latin), neathess, tastefuluess.
Mutatis mutandis, (Latin), with such changes as are requisite to be made.

Mutuality, the common interests of Society; the Unitary Aspect of Society. Mysticisy; see-lsy.
Mystics, Philosophers whose doctrines are involved and incomr rehensible from the assumption of Spiritual and Transcendental premises which are not proven, and from the use of Intuition more than Reason and Demoustration.

## N.

Natural Order, The Order of Procedure from Nature to Science, from the World to Man, from Sensation to Reflection; from the Feet and Pelvis to the Chest and Head; from Without to Within; from themere Facts of Observation to Truths, Principles and Laws; etc.
$\mathrm{N}_{\text {atural Philosophy, }}$ 1. In a limited and not very accurate sense the Mechanical Properties and Laws of Bodies, and Physies; 2. In the enlarged and proper sense, (Comtean), the Generalized and Encyclopædic treatment of the Positive Sciences; a Naturismal, Unismal (or Psendo-) stage of ScientoPhilosophy; also herein denominated Generalogy, (t. 337.)

Nature, is used in diverse senses ; sometimes for the Spirit or the Ideal Personification of the Spirit of All Things; but, contrasted with Science and Art, it is ihe First Crude Conditions of any Sphere of Being. Sometimes it is used in so total a sense that it includes all Science and Art, all, in a word, that can be; but, otherwise, and especially, in the Universological sense, it means the Lowest or Unismal stage of Development, as contrasted with Science and Art, Duismal and Trinismal, respectively. (t. 10, 541.) See Science, Art, Naturismus, under-Isarcs.

Naturiss; see -Iss.
Naturisyal ; see -Ismal.
Naterismic; see -Ismic.
Naturismes ; see-Ismis.
Naturistic ; see Index, word Naturismal.
Naturo- ${ }^{\text {bsitract }}$; see Abstract-Conerete.
Naturo Abstractisaj; see -Ism.
Naturoid; see-Oio.
Naturo-Metaphysie, Metaphysics or Psyelology of the Old Order, as distinguished from Sciento-Philosoply, (the New Style of Metaplysics.) See Sciento-Philosophy, ArtoPhilosoply.

Natcro-Negative, that which is Negative, from the Unismal or Naturismal point of view, (t. 811.)

Naturo-Fillosophoid ; see -Oid.
Naturo-Positive, that which is Positive from the Unismal or Naturismal point of view, (t. 811.)
Neqation, whatsoever is not, $=$ Nothing.
Negatism; see-Isa.
Negato-Absolutoid; see -Oid.
Nertaura; see Odie Force.
Nexus, (Latin), a neek or connecting link.
Nicban, the "Annihilation" of Mindoo Philosophy.
Ninilisy ; see -Isy.
Nodes, (Latin), a knot.
Noetic, (Greek), knowable, cognizable.
Nomenclature, the system of Namings, adopted in any Science; for that of Universology ; sce Commentary, t. 43.
Nominalists, The Nominalists were a sect of philosophers in the middle ages who held that generals, or the term used to denote the genera and species of things, are not properly designations of things that exist, but mere nanes for the resemblances and evidences of things; see Realists.

Non-differextiated, without Differentiation; relating to a state prior to differentiation.
Now-explicated, not developed into the minutix of differentiation and details.

Non-Substantialism; see-Ism.
Non-flurilizable, that camot be made plural ; said of Nouns-Substantive which denote Substances or Stuffs' (Substancire Nouns) as pitch, butter, mud. See Pluralizable.
Norax, a rule, pattern, or precept; a standard; a type-form.

Normal, Standard, Diametrical, Axial; according to Norm or P'attern ; standard, " a-
cording to an established law, rule, or principle."

Not-Me, The, the Objective World; see Me.

Noumena, (Greek), plural of Noumenon.
Notmenon, the unknown and absolute substratum of Being, back of Phenomena; see The Absolute.

Nous, (Greek), Mind.
Nunerism; see -Ism.

Numerisical ; see-Ismal.
Numerismus; see -Isaus.
Numerology; see -Ology.
Nuntir, (Latin, pl. of Nuntius), Announcers, arant-couriers, messengers.

Nuptral, relating to marriage or conjunetion, t. 987.

Nuptialisar, Principle embodied in, and symbolized by, marriage and sexual conjunction.

## o.

Овлест, that which is External, and contemplated as Without, whether a single thing or the Whole External Universa; The Outer World; see Subject.
Objective, 1. That which is Exterior or External to the Observer ; 2. That which relates to the External Universe at large as contrasted with what relates to Man, Comte; see Subjective.
Objectivismus; see -Ismes.
Observatioval, Encyclopædic, Aggregative, relating to Facts, Experiential; relating to Broad and External Generalizations.

Observational Generalizations, Generalizations founded on the observation and classification of Facts; Laws, as General expressions of Obscrved Phenomena; see Analytical Generalizations. (t. 1010-1012.)

Odic, or Odylic Forice, The occult Force emanating, according to Reichenbach, from all objects and substances; alleged to be that which produces the phenomena of Mesmerism, Hypnotism and "Psychology," and supposed to be analogous with magnetic and other forces; the same, probably, when emanating from the human being, as the Nervo-Vital Fluid of Matteucci, or the Nervaura of Buchanan; the same, when intervening betreen planets, as the Aromal Currents of Fourier, and, in a spiritual sense, as affecting Souls or the Mind, the same, by analogy, as the Efflux and Influx of Swedenborg ; and in the IIighest and Divine Sense, as the Holy Spirit or the Holy Ghost of the standard Theology, or, more truly, of the New Catholic Theology; see Theology, and Spirit; The Spiritual Hypostasis of God, or the Third "Person" of the Trinity. It is
this emanation of subtle and attenuated spiritual forces which was symbolized instinctually by the radiating Halo or Glory placed by the old painters round the heads of Saints, and sometimes as pencils of streaming rays from the hollow of the hands. What was intuitionally recognized and represented by the sacred artists in the olden time as the occult dynamic relationship of being, is becoming familiar knowledge with thousands of mediumistic persons and scientific observers of the present day. It is one of the culminating demonstrations of Universology that, by Spiritual Radiations and Emanations, every Soul and Body in the Universe is intimately and vitally connected and associated with every other Soul and Body, constituting, in the aggregate, The Grand Man, as a real Organismus, with a Circulation and Life, common to all the parts. This entirety of the Collective Humanity is what Fourier intuited and designated by the term the "Solidarity of the Race." The Quiescent, Diffused, Confluent Circumambiency of the Object, Planet or Man, the Aeriform Sphere of the Individual, analogous with the Atmosphere of the Planet, and the Great Interplanetary Ocean of Ether, are allied with what is meant by "Etheria." For the special definition of this last see $t .60$. The Ether-World is the Matrix or Continent of the Radiating Odylic Forces, which penetratingly and diffusively permeate it in all directions, constituting the Radiating or Dynamic "Sphere" (of the Object or Individual), analogons with Light, Heat, Electricity, and Magnetism. (Gr. Hodos, Passage, and Hulē, Matter or Material.) See -Ism, Medium, Dessianism, Dynamic.

## OID.

-Ord, a Termination which as an Adjective signifies -like or resembling, somewhat like, or similar, synonynous with the expressive but inclegant English termination -ISE ; as a

Substantive it denotes a single Object or Thing which embodies and Typifies the Principle named in the stem of the word to whieh it is affixed. (c. 1-14, t. 43.)

## alpiiabetic arraygejient, under -0id, of words exding iv -oid.

## A.

Absoletord, (Adj.) resembling The Absolute; (Subs.) any single Object which embodies and illustrates The Absolute.
Abstractord, (Adj.) nearly abstract; resembling the Abstract; (Subs.) any thin or attennated Object, embodying and illus. trating the idea of The Abstract. (a. 2, t. 575.)

Adjectivoid(AL), relating to Adjectivoids or Adjectoids.
Adjectivoids, or Anjectords, Analogues of Acljectives in Grammar or of The Aspects of Being represented by Adjectives.

Adelromb, corresponding with the Adultismus and with whatsoever characterizes the Adult.
Analytoid; see Analytismal.
Antirmopoid, (Adj.) similar to man, especially in regard to shape; (Subs.) a figure in the human shape. (Gr. Anthro. pos, Man ; eidos, Form.)
Anthropord-cle, a little Anthropoid.
Artoid, (Adj.) analogieal with Art; (Subs.) an Object which embodies and symbolizes the Spirit of Art.

## C.

Cardinoid, resembling a hinge, working like Concretoid, (Adj.) nearly Concrete; rea hinge.
Celestroid, resembling the Hearens.
Crrculord, nearly circular, resembling a circle.
Comparatoin, analngous with Comparison.
Concentrico-Plasord, relating to the onionsembling the Concrete; (Subs.), any thick, haavy, obtuse Object, embodying and illustrating the idea of The Concrete.
Conditionoid (Adj.), resembling The Conditional; (Subs.), any single Object which embodies and illustrates The Conditional.
Cubord, nearly cubic, resembling a cube.
like arrangement of Planoids, (t. 637): see Planoid.

## D.

Dirisionord, tencling towards, or resembling division.
Duord, (Adj.), rosembling Duality or Du-
ism; (Subs.), any single Object which embodies and illustrates the idea of Duality or Duism.

## E.

Farementiond, emilar to Expcrience ; analocgous with Expericnco.

## F.

Feminoid, corresponding with that which characterizes the Female.

## G.

Generaloid, (Adj.), analogous with the Do- Globoid, nearly globular ; similar in form to main and Priuciple of Generality ; (Subs.), a globe. any single thing which embodies and illustrates the idea of Generality.

## I.

Infantom, corresponding with that which relates to Infancy.

## M.

Masculom, corresponding with that which characterizes the Male.
Materioid, or Matteroid, having the form or character of matter; like matter.
Matteroid ; see Materioid.

Mentord, analogous with a Mind.
Morphoid, (Adj.), resembling Form; (Subs.), any single Object which embodies the idea of Form.
Motord, analogous with Motion.

## N.

Naturoid, (Adj.), analogical with Nature; (Subs.), an object which is so.
Naturo-Philosophoid, relating to, or resembling, Natural Philosophy.

Negato-Absoletoid, analogical with the Ne gative Aspect or Department of The Absolute.
O.

Optrmord, that which is relatively, not ab- Ordinoid, resembling Ordinality, or the Or-
solutely, "The Best."
dinismus. Organoid, resembling an Organ.

## P.

Pessruord, that which is relatively, not absolutely, "The Worst."
Philosophoid, correspondential with the Philosophical Domain.
Plavord, (Adj.), approximately Plane or Level; (Subs.), a Plane-like curved Surface, t. 637.

Pleraloid, that which is analogous with the Plural Number.
Primiciold, analogous with or resembling incipient stages of Being.
Pyramidoid, nearly pyramidal; resembling a pyramid in shape.
R.

Radioid, diverging as radii from a common Rectoid, proximately or nearly straight; centre.
Rectilinioid, nearly rectilinear or straight.
straiglitish.
Relation; see Conditionoid.

Reflexionoid, corresponding with what Regoloin, nearly regular; approximating
characterizes the age of maturity and reflexion, in the development of mind.
without attaining to perfect regularity.

## S.

Scientord, (Adj.), analogical with Science; (Subs.), an Object which is so.
Senatoid: see Senectoid.
Senectord, corresponding with that which relates to Old Agc. (Lat. Senex, aul old man.)
Sensationord, analogical with Sensation.
Sivacloid, that which is analogous with the Singular Number.
Spa-oE-ord, or Spacioid, analogous with Space, resembling Space.
Speclaloid, aualogons with the Domain and Principle of Speciality.
Spiritoid, analogous with Spirit.
STAToid, (Adj.), allicd with Station, Quiet, or

Rest; (Subs.), any Object illustrative of statism.
Substan ce-oid, analogous with Substance, Material, or Stuff, as that of which things are composed.
Substantivoidal, relating to Substantivoids.
Substantivoids or Substantoids, analogues of Substantives in Grummar or of the Instances of Being (Objucts) represented by Substantives.
Substantoids, or Substantivoids, Real Objects, such as are named grammaticully as Substantives.
Stato-Conditionolds,
Synuetricow, proximately symmetrical.

## T.

Texpoid, Time-like, related to Time.
Temporoid, that which is analogous with Time, or Temporalities.

Trinord, (Adj.), similar to Trinity or Trinism; (Subs.), an Object illustrative of Trinism.

## U.

Ultmatoid, resembling finality.
Universaloid, analogous with the Domain and Principle of Universality.

Unord, (Adj.), Similar to Unity or Unism; (Subs.), an Object illustrative of Unism.

## OLOGY.

-Ology, -Alogy, -Logy, a termination meaning Lore (German Lehre) or Science, from the Greek Logos, Discourse, Word,

Reason, together with the initial vowel 0 , as connecting vowel with the stem of the word, as Ge-o-logy, fiom Ge $\bar{e}$, Earth, and Logos.

# ALPHABETIC ARRANGEMENT, UNDER -OLOGY, OF WORDS ENDING IN -OLOGY. 

## A.

Absoletology, The Science of The $\Lambda$ bso- Abstract-Concretology, The Science of the lute; The Primismus of Ontology, (t. Abstract-Concretismus; "The Abstract444.)

Abstractology, The Science of the Abstractismus; "The Abstract Sciences" of Spencer, including Logic and Mathematics.
Actronology; The Science of Activities or Performance, related to Practical Philosophy.
Anthropo-Corporology, the Science of the Human Body, $=$ Human Physiology.
Axthropology, (as used in this work), The Total Science of Man ; contrasts with Cosmology; (Gr. Anthropos, Mav), (t. 3.)
Anthropo-Mentology, Psychology, the Science of the Mind.
Appetology, the Science of effecting ends or
purposes by the use of Fascination or Charm ; of Government by Attraction.
Arbitrismology, the Science of the Arbitrismus, or of that Domain of Administration or Affairs in the Universe at large, or in Minor Spheres, in which Arbitrism or Absolutism prevails ; The Theory of Administration which rests on Absolutism or the Gorerning Authority of a Personal Will, whether of God or of any Autocrat or unlimited Monarch whatsoever.
Aptishology, Science of the Artismus; of that Domain of Being in which Artism, the Principle or Spirit of Art, predominates or prevails.

## B.

Barologr, the Science of Weight. (Gr. Biologr, the Science of Living Being; reBarus, Heavy.) getable or animal. (Gr. Bios, Life.)

## C.

Classiozogy, a branch of Concretology, embracing Tellurology, Meteorologr, and Uranology. (Lat. Classis, a Ravae or Class.) (t. 634.)
Conparologr, Comparative Science; Science of the Relationships between different Domains or Spheres; as Comparative Anatomy, Comparative Philology, etc. ; contrasts with Monocrematology or Monospherology, which see.

Concretology, The Science of the Concretismus; "The Concrete Sciences" of Spencer, (t. 247.)
Corporologr, The Science of Real Bodies; Concretology. (Lat. Corpus, a Body.)
Cosmology, The Science of the World, as contrasted with Anthropology the Science of Man. (Gr. Cosmos, The World.)
E.

Ecoroyrology, The Science of the Economy of Labor and its Results, in every department of Human activity and production; as for instance Roscher proposes to follow his Principles of Political Z.conomy br an Economy of Agriculture, an Economy of Industry, etc., and Théodore Wechniakoff labors in behalf of an Economy (i. e. a Science of the Economy) of Scientific Labors and their Results. (Gr. Oikos, Hocse; Nomos. Lat ; Logos, Discourse.)
Ecstatology. The Science of Eestaticism, a branch of Ontology, (t. 466.)
Elementology, The Science of any Elementary Department of Being; as for instance of the (Phonetic) Elements of Speech.

Embryology, The Science of Fœtal Life and Derelopment.
Endo-Stabiliology, The Internal or Subjective Department of Stabiliology, (t. 627.)
Epi-Cosyology, The Science of those Objects which are sustained upon the surface of the earth. (Gr. epi, cpor ; Cosmos, World.) - Doherty.
Etiology, The Science of Causes. (Gr. Aitia, Catse.)
Exactology, The Exact Sciences as one Grand Department of Science ; Abstractology.
Exo-Stabiliology. The External or Objective Department of Stabiliology, (t. 627.)

## F

Fractiontimology, The Science of the Fractionismus, or the Interior Morphology and Structurology of Being; contrasts with Integerismology. (t. 303.)

Functionology, The Science of Functions in Physiology. See Gesturology.

## G.

Gexeralogy, 1. Observational (Generalogy), = Encyclopædic, Comtean view of the Sciences; Natural Philosophy in this larger sense of the term; The Naturismus of Sci-ento-Philosophy; see Sciento-Philosophy. 2. Analytical (Generalogy), That of this Work, Exact, Scienta-Transcendental, deduced from Necessary Truths; Proper; The Scientismus of Sciento-Philosophy; see Sciento-Philosophy. 3. Composite (Gen-
eralogy), $=$ Arto-Philosophy, to be hereafter elaborated; Contrasts with Specialogy; (t. 337.)
Gesturology, The Science of Gestures, Exterior Functionology, and of the Natural Language of the Movements of the Body.
Goneologr, The Science of angles or corners, related to Crystals. (Gr. gonia, angle or Corner.)

## I.

Ideoloar, The Science of Ideas.
Indeterminology, The Science of the Indeterminismus, or of the Indeterminate Department of any Domain, as of Amalgams or Mixtures in Chemistry. (t. 332.)
Individuology, The Science of Individual Life as contrasted with Sociology.
Infernologr, The Science of the Hells in the Spirit World; (Lat. Infernus, beneati; Held.)
Infinitology, The Science of the Infinite; the Duismus of Ontology, (t. 447.)

Inoranismologr, The Science of The Inorganismus, or The Inorganic World.
Integerismology, The Science of the Integerismus; or of the External Arrangement, the Systematology, of Being ; Contrasts with Fractionismology; (Lat. Integer, a Whole.) (t. 310.)
Interisholoay, The Science of Purgatory, or of the World of Spirits. (Lat. Inter, between, Interior, Internal.) (t. 419.)

## L.

Logtcramoloay, The Science of the Logicismus or of that Domain of Being and of the Administration of Affairs in the Universe at large, or in Minor Spheres, in which

Logicism or the Paramount Authority of Law prevails over all Individual Will or Wills. Contrasts with Arbitrismology. See Logicism. (t. 351.)

## M.

Macro-Cosmologe, Cosmology in a larger sense embracing Metaphysics and Physical Science of the Lower or Material Order ; excluding Pneumatology and Anthropol-
ogy. (Gr. makros, areat.) See Typioal Table, No. 7, t. 40.
Macro-Mineralogy, The Science of the Entire Mincral World in the enlarged sense,
including the Planetary Worlds as Mineral Bodies, (Micro-) Mineralogy, Crystalography, Geology, etc.
Macro-Physiology, Physiology in the larger sense including Anatomy, Physiology, (Mi-cro-Physiology), etc., as branches. (c. 1, t. 5.)

Massology, The Science of Muterials, Stuff, Substance, as in Chemistry ; contrasted with Corporology, the Science of Bodies distinctified in form.
Materiology, The Science of the Material W orld, or of Matter.
Mechanology, The Science of Mechanics; the five or seven mechanical Principles reduced to a single Principle, (t. 636.) See Wedgism, under -Isw.
Mentology, Psychology, the Science of the Mind. (Lat. Meus, Mind.)
Meteorology, The Science which treats of the Atmosphere, and its Phenomena, particularly of Heat and Moisture; of The Weather; Thunder, Lightning, etc.
Mrcro-Cosnology, Cosmology in the Minor or Ordinary sense ; see Macro-Cosmology.
Micro-Mineralogy, Mineralogy in the Minor or Ordinary sense; see Macro-Mineralogy.
Micro-Physiology, Physiology in the restricted sense; see Macro-Physiology.

Monanthropology, The Science of the Individual Mian as contrasted with Sociology, while yet excluding Physiology and Biology proper; somewhat indeterminately limited to Phrenology, The Temperaments, etc., (t. 5.) (Gr. monos, sole or single; Anthropos, Man.)
Monoorematology; see Monospherology. (Gr. monos, sole or sliglee; krèma, Thing.)
Monospherology, The Science of The Single Sphere or Domain ; contrasted with Comparology or Comparative Science. (Gr. monos, sole or single; Sphaire, a Speere.)
Morphology, The Great New and Rising Science which treats of Form, and of Specific Forms or Shapes, whether Abstractly, or of Real Objects in Nature ; and of their Symbolism or Significance; The Natural History of Form; Contrasts directly with Substan-ce-ology, or Massology, and indirectly with Corporology, as Bodies are the Composity of Substance and Form. (Gr. Morphè, Form.)
Moto-Concretology; see Actionology.
Morology, The Science of the Motismus, the Moving, or Developing and Progressive Aspect of Being; Historical ; Contrasts with Statology.

## N.

Non-Stabiliology, The Scientific Theory which counterparts Stabiliology; corresponds to Nihilism in Philosophy.

Numerology, The Generalized Science of Number; corresponds to Morphology in respect to Form; see Morphology.

## O.

Ontology, That part of the Science of Metaphysics which investigates and explains the nature and essence of all Being, its qualities and attributes.
Operology, (Macro-Technology), The Sci-
ence of Activities; = Actionology and Practical Philosophy.
Organismology, The Science of the Organismus, or of the Organic World ; of the Vegetable and the Animal Worlds, and their Analogues.

## P.

Pantology; see Universology. (Gr. Pan, Phonology, The Science of Sounds as emall.) ployed in Speech; same as Phonetics. (Gr. Phonos, Sound.)
Phenomenology, The Science of Phenomena.
Philology, The Science of Language, especially as Comparative Etymology.

Plurimorphology, The Science of Minute Limitation and Configuration; see Uni-
morphology. The Highest and Primitive Stage of Plurimorphology concerns Qualitutive Differentiation, or the Lines of Dcmareation between the Shades of Quantity, as of color, weight, intensity, etc., and The Linking of Qualitative Phenomena (so discriminated) into their Relations constitutes The Science of Logic; as The Linking of Quantitative Phenomena (Unimorplic) into their Relations constitutes Mathematics.
Pnelasato-Antilopology, The Science of the Inhabitants of the Spirit-World. See Pueumato-Cosmology, and Pueumatology.
(Gr. Paecma, Spirit, Air; Anti:ropes, Mran.) (t. 399.)
Paeumato-Cosmology, The Science of the Spirit-World considered as an outer world or Cosmos, apart from its Inhabitants. See Pneumato-Anthropology, and Pneumatology. (Gr. Pxetası, Spirit; Cosmros, World.) (t. 399.)
Paeonatology, The Science of Spirit-Life and Being.
Psycholigay, (or Mentology), The Science of the Mind.

## R.

Regrology, A collective name for the one Department of Science which includes the special sciences of the "Three Kingdoms," -(Macro-) Nineralogy, Vegetalogy and Auimalogy. (Lat. Regnum, $\boldsymbol{\Delta}$ Kingdoar.)

Repulshonology, The Science or Theory which counterparts the doctrine of attraction. -Winslowo.

## S.

Sociologr, The Science of (Human) Society ; i. Ordinary, concerning itself with Statistics, Political Economy, Education, Pauperism, Crime, etc. ; II. Transcendental, relating to the Radical Reorganization of Society, Scientifically and Pantarchally, the Millennium to be introduced through Science and the Revivification of the Religious Sentiment of Mankind on the basis of the Reconciliation of Knowledge and Faith.
Somatology, The Science of the General Properties of Matter, as Impenetrability, Gravity, etc. (Gr. Soma, a Body.)
Spectalogy, The Sciences segregated and pursued each as independent of the others; contrasts with Generalogy, The Comtean Natural Philosophy, (t. 337, 339), and with Comparology, which see.
Spectlologr, The Department of Metaphysies intermediate between Ontology and Theology ; or Metaphysics exclusive of On-
tology and Theology as special branches or aspects of Metaphysics, (t. 345.)
Stabiliology, The Science of the Levels and Standard Lines in Space, in accordance with which all things are conceived of as constituted and measured; see Bi-Trinacria.
Stato-Concretology, The Science of the Stationary aspect of the Concrete World.
Statology, The Science of the Statismus, or of the Stationary Aspect of Being ; contrasts with Motology.
Structurologe, The Science of Structure, or of the Internal Arrangement of Parts; see Systematology.
Supernologx, The Science of the Spiritual Heavens, of the Spirit-W orld. (Lat. supernus, above.)
Symbolology, The Science of Symbolisin.
Systematology, The Science of the Arrangement, externally, of objects in System or Scheme, as for instance a System of Classification ; see Structurology.

## T.

Teleology, The Science of Final Canses or Ends; the Demonstration of the Existence of an Inherent Plan or Schema, or of a Quasi-Plan or Schema, in the Erolution of
the Universe at Large, and in each Act of the Drama, in virtue of which all things conspire to a definite Denouement, and to the best possible result: the ultimate
achievement of the Supreme (-est Practical or Possible) Perfection. (Gr. Telos, an End or Aim.)
Tellurology, The Science of the Earth and of Objects directly upon the Earth, contrasted with Meteorology, which relates to the Phenomena of the Atmosphere, and with Uranology which relates to the Heavens. (Lat. Tellus, The Earth.)
Temperamentology, The Science of Temperaments.
Theology, Quasi-Scientific, Semi-Scientific, Ecclesiastical, a Faith or Belief rather than assured Knowledge or Science, noticed and defined, t. 17, 20.

Theology, as Science properly so called, is the Science which treats of the Existence, Nature and Attributes of God, or of his Non-Existence or absence of Attributeswhich, in other words, investigates the question of his existence and character radically and impartially, and teaches only what becomes known on the subject, as in every other matter of Science, and with the characteristic modesty of Science, leaving the unknown, for the time being, unaffirmed; denouncing or anathematizing no one for the natural leanings of his own mind or his educational beliefs, prior to the acquisition of reliable certainty on the subject.

Existing Theological theories are mainly Three : 1. Christian Deism. 2. Atheism. 3. Pantheism. These are often strangely and unconsciously mixed. The Brahmins affirm that the Supreine God is Sagūn, 'with attributes,' and Nirgūn, 'without attributes.' (Posita-Negative.) Sir William Hamilton's Philosophy, extensively accepted by orthodox Theologians, makes God, in so far as he is The Absolute, to be non-cognizable by the manifestation of any properties whatsoever. The Onrevealed God of the Swedenborgian Faith is likewise absolutely Unknown and Unknowable, except as incarnated in Christ, as "The Lord," and through him, in the Heavens and downward in the Human Family and the World universally. The Trinity of this Theology is a Trinity of Principles, "The Divine Love," "The Divine Wisdom," and "The Divine Operation;" more radically and abstractly, the Unism, Duism and Trinism of the Ideal Conception of Divine Character. The Divine Personality is confined to the Lord in one Person.

The Atheist, on the other hand, does not deny the existence of God alsolutely, or in all senses. Perhaps there is no intelligent thinker who doubts the existence of some Central and Controlling Influence or Potency, some " Creative Energy of Nature," presiding over and directing the affairs of the Universe. He denies, only, or fails to consider as proven, the Human-like and Reflectively Conscious Character, the Developed Personality, in a word, of this Central Potency. The critical Philosopher, if he doubts or denies a Plan (or Conscious Design) in the Operations of Nature, affirms at the same instant, the existence of a Quasi-Plan, a modus in the Outlay and Procedure of the Universe, which is precisely like the Plan of a Conscious Intelligence. In the scientific posture of mind, and in advance of demonstration, the question is reserved, whether the "Creative Energy" is, in fact, a conscious Intelligence, or whether the Automatic Inherent Necessity of Being, operating as Law and Regulative Potency, assumes the appearance of Intelligence, and when incarnated in Man, and then only, becomes Intelligence, Affection, and Will.

This latter Conception, that of Inherent Necessity or Law, is Logicism, or the Abstract theory of Pure Rationalism. The Nodus or Core of Self-Existent and Nec. essary Principles, which are thus conceived of as adequate to the government of the Universe, are then spoken of as God, and referred to by the relatives $H e, H i s$, and $H i m$, only, however, by an acknowledged figure of speech, which puts an Ideal Real Personality for the Quasi-Personality really believed in. This habit of thought and speech is justified by the history of Theological Beliefs, since Attributes and Properties have always been personified, and then deified as readily as Persons. The term God has thus become the common property of the Rationalist and of the Pietist. It is this Positive Form of the Abstract Conception which distinguishes the position of the Theological Rationalist from the Negative position of the Atheist; its Abstract and Logicismal character and its Centering Unity distinguish it on the other hand from Ordinary Pantheism, which identifies God with the Substance-like and Material Universe.

Pietism and Arbitrism are identified with the Personal Theological Conception, which tends, by development, to become constantly more and more Rational. This is the Natural (Naturalistic, Materialistic, Naturo-Philosophic or Ordinary) Order of the Progression and Development of Thought. Rationalism and Logicism are identified, on the other hand, with the Conception of origins from Abstract Principles, which conception tends, by its alliance with the idea of Ulterior Incarnation, to become constantly more and more Personal. This is the Logical (Idcalistic, Spiritualistic, Sciento-Philosophic, or Transcendental) Order of the Progression and Development of Thought. The former Theory is Unismal; the latter is Duismal. The Grand Ultimate Trinismal Conception of The Divine Nature rests on Universological Reconciliation and Integralism, and will be gradually unfolded in the Religious Writings of the New Catholic Church. It will vindicate in a valid and rital sense, the Pietistic and Pcrsonal Conception of God on the one hand, and the Rationalistic Conception, on the other, conjoining and harmonizing the two in the larger embrace of Univariant adjustment, in the Millennial Theology of the Future, t. 1110-1123.
(Note. Deism, though signifying properly belief in God, has been employed by "Infidels" to denote this amount of Positive Faith, while yet implying disbelief of Inspiration and Revelation. The term has in this manner become vitiated for the use of derout Christians. I have adopted therefore the term Christian Deism for the positive idea without the negative implication. Theism is not liable to the same objection, but is perhaps less popularly known.) See God, Catholic, Catholic Church, The New, The Old, Arbitrism, Logicisin, Integralism, Cardinisin, and Index, terms, Natural Order and Logical Ordcr.

The entire Theological Field of Thought may now be expanded and re-presented, in a coup d'ceil, as follows :

1. The Human-like Personal God; "Affectional; "God the Son," "The Messias," "Iminanuel" or "God with Us," "Christ" or "The Lord," All personally-conceived-nf Godhood, even the Jehovistic conception of the Jewish Theology-Unisyas ; prior
in the Order of Incarnation or Actual Revelation on Earth; First, therefore, in the Natural or Historical Order; (Yau, subdivided into Hypostases, or Impersonations, as $\mathrm{Y}_{1}, \mathrm{Y}_{\mathrm{A}}$, etc.) ; see further on; see also -Issi, and Messias.
2. The Pure Abstract God, Abstract Attribution, (sec-Ism); The Lorrical Tri-une Knoi $0_{i}^{\circ}$ Absolute Inherent Universal and Necessary Laws (Unism, Duism and Trinism) in the Origin and Nature of Being; "ruling the Nations with a Rod of Iron," "The Fate back of Jove;" The "Logos," who "was in the beginning with God," and who "was God," and without whom " was not any thing made that was made,"-DursMAL, Scientic ; prior in the order of Necessary Thought; First, therefore, in the Logical Order; Universological; (WAU, subdivided into Hypostases, as Wi, Wo, etc.) ; see farther on.
3. The Holy Ghost; Spiritual; in the Supreme Sense; The Attenuated, Insensible Emanation from Abstract Inherent Truth or Law (a. 48, t. 204), permeating, irradiating and mysteriously regenerating all Human Incarnation (" descending like a dove" and resting on "the Son of Man,") the wind which "bloweth where it listeth, and ye hear the sound thereof, but cannot tell whence it cometh nor where it goeth;" God "a Spirit," Interventional, Mediatorial, Sesqcisyal; (Hau, subdivisible into Hypostases, Hr, He, etc.) ; see Spirit, Odic Force, Sesquism, under -Isy, and below.
4. The Tri-Unismal Godhead, the Omnivariantly Integral, Cardinismal, Differen-tiation-and-Integration of the three preceding Conceptions, related to, but in a sense transcending, the otherwise Incomprehensible (Personal) Trinity of the Trinitarian Theology; see Trievisyal; Cardinism, Univariety.
5. The One Sole God, par excellence, the Abstraction of The Unismal and Integrating Aspect of the Conception of The Divine ; Pivoto-Integral ; The God (in the ba-sis-idca) of the Unitarian System of Theology (t. 128-132), cardinated between the Subjective Individual Soul and the Objective Universe; hence half radicated in Humanity itself, which it, therefore, tends to elevate in the Scale of Dignity, in contrast with the scheme of Theology which makes the Objective God to bo "All in All," and

Man to be virtually nothing; see PivotoIntegralism; (also $\mathrm{Y}_{\mathrm{I}}$, the Primitive Hy postasis under Yau; see below.)
6. The Abstraction and Variegated Diffraction of the Duismal or Differentiative Aspect of the Conception of The Divine; Polytheism, Pantheism; (Wr, The Primitive Hypostasis under Wau ; see below.)
7. The Denial of God, as any other than the regulative form of our own Thinking, or the Objectification of our own personality, making God to be created in the image of Man, reversing and counterparting the idea of Man as created in the image of God-Atheistic ; (AUH, see below.)
8. And, finally; the Differentiation, Integration and Reconciliation, Universologically, of all the Seren preceding Forms of the Total Theological Conception, in the demonstration that they are all Inevitable Aspects of a Complex Truth too various in its Complexity to have been otherwise apprehended by the Infantile Understanding of the Human Race, than in Segments or Fragmentary Portions of the Truth, whence came Sects and Systems; a truth wLich when integrally revealed, intellectually, is the Omnivariant and Reconciliative Theology of the New Catholicity; (Hwyau, see below.)

It may seem that the preceding distribution, carrying up Theological Discriminations from the usual twofold or threefold difference to a scale of Seven compounded or recombined in an Eighth, must be complete. It may be well, however, in conclusion, to make an exhibit, (more for future reference, elsewhere, than as a completed demonstration at this point), of the power of the Principles of Alwato, the New Scientific Universal Language, not only to subserve the purposes of exhaustive classification, but to compel the mind of the investigator into the perception of the most minute distinctions on the one haud, as well as of the broadest generalizations on the other; so serving as an Instrument of, a Canon of Criticism upon, all classification. See for the Vowel Scale and for a slight account of the Meanings of the Elements of Speech, Universology under-Ology, and, for other instances of Alwaso Composition, Psychology and Tikiwa, (in this Vocabulary.)

The Leading Elements of Speech involved in the Alwaso Namings of Theological ideas are the three Ambigu's $h, y, w$,
sometimes called Coalescents, and also Semi-Vowels, from their half-consonant, half-vowel character. The Meanings which Nature has attached to these three sounds are stated below, but the grounds of the statement must be waited for until the appearance of other works.

## RESTATEMENT.

It is pointed out by Proudhon that Religion deals with Substance, Philosophy with Cause(s) and Science with Law. This is substantially the same view as that of Comte, who employs the terms Theology, Metaphysics and Positive Science for the three stages (as apprehended by him) of the Erolution of the Human Mind. It is held by Comte that the effort to penetrate Substance and Cause(s) is essentially futile, and that the investigation of Laws and Phenomena (in Co-existence and Sequence, Space and Time-Relations), is the only feasible and fruitful domain of human intellectual effort. It results from the Principles established in this worlc that, while, in the Absolute, Substance and Cause are inscrutable, so, in the Absolute, is Law; and that, on the other hand, neither can Substance and Cause, (in that relative sense in which we are able to investigate any thing), any more than Law be banished from the field of our enquiry; that in other words: Religion, (Theology), and Metaphysics will always remain two of the Grand and Legitimate Domains of Human Concernment. It is nevertheless true that the Dominant Stand-Point of the investigating Human Mind changes progressively, and in the sense pointed out by Comte; and that the Echosophic (or True Scientific) Spirit has come to rule in this Age, and will, ineritably, react powerfully and reconstitutively upon all Theological and Metaphysical subjects. There will be no actual expulsion of any point of view which the Human Mind has ever occnpied, but, a lenning merely, in predominance, to other and for the period, more governing Mental Positions. There is Inexpugnability of Prine Elements (t. 226), Terminal Conversion into Opposites (t. 84), Mere Preponderance ( t . 536 ), and Overla pping (t.527), everywhere, but no annihilation of any Point in Space or Drift of Procedure, anywhere. The Man has ceased to be a child, but the whole
distinctive chill-character has been subsumed in the character of the man. The old Point of View is not, therefore, merely an Erent of the Past, but is also an Eifective Element or Factor of the Present and the Future.

The Proto-Determinishly (The Unisarcs) of Universal Being, (above Chaos, Tie Indeterminismus of Being), is Scbstance. The Sectado-Determintsarts (Dusircs) is Form, (Limitation and Quantification or Measure). The Trito-Determinisacs (Trinisicts) is Body (or Eedies), the Compound Resultant of Substance ard Form. Intermediate between Substance and Form, a Breath, inspired and expired as it were, between the Lips of Existence, is Spirit, The Sesqut-Deteraritsacts (Eesquisurs) of Being (between tie One and the Two); and inasmuch as "God is a Spirit," the Domain of Theology is Preerninently within this Spiritual Domain; but inasmuch as Theology concerns itself in another sense, also, with Stbetayce as shown by Proudion and Comte, it has to do with these two Domains, of Substance and Spirit, respectively.

But now, the Proto-Determinisirts (The Cxisyrs) of the Elementismus of Speech (the Alpbabetic Domain), abore Chaotic Sounds, The Indeterminismus of Speech, is The Yowels, the Analogue of Substance; the Secundo-Determinisarts (Tie Deisurs) is The Abstractoid and Ligutd Consonayt-Sounds ( $\mathrm{t}, \mathrm{k}, \mathrm{p}$, etc., $\mathrm{m}, \mathrm{n}, \mathrm{l}$, r ) the Analognes of Limits and Measure; and the Trito-Determinisarts (The Trinrames) is the Concretoid ConsonattSocxps ( $\mathrm{d}, \mathrm{g}, \mathrm{b}$, etc.), the Analognes of Body or Bodies. Finally, The Sesqur-Determintsirts (The Sesquisurs) in this sphere, embraces The Three (Semi-Vowel) Coalescents, Ambigu's or Breaths ( $\mathrm{h}, \mathrm{5}$, and w), the Analogue of Spirit. The Alwaso or Natural Theological Terms should thercfore be found constituted from The Vowels and The Ambigu's (for Substance and Spirit.) This aecordingly they are, not without certain apparently fortuitous confirmations from existing languages, as follors:
The three Pivotal or Fundamental Vowel3 are a (ah), i , (ee), and o , (the Sanscrit Grammarians would say u(oo) for the last, in place of 0 ; the preference of $o$ is based,
however, on sufficient crounds expounded elsewhere (see "Alphabet of the Universe.") The Artistic Urder of these Three Vowels is i, $o, a$; their Latural but Inverted Order is $\mathrm{i}, \mathrm{a}, \mathrm{o}$; (see 'Alphabet of the Universe.") The First of these Successions or Orders of the Pivotal Vowels (Domain of Substance or The Reality of Being) furnishes the word $\mathrm{I}, \mathrm{o}, \mathrm{A}(\mathrm{I}-\mathrm{o}-\mathrm{ah})$, which witi the natural ingrowth of the Related Ambigu's becomes $Y i-h o-v a$, substantially the Hebrew Basis of the English Jehoorah. Theologians lave always suspected the presence of some mystical and inspired or semi-inspired occult meaning in these vorels so combined. The opposite order, $\mathrm{i}, \mathrm{a}, \mathrm{o}$, furnishes the word $Y a, \circ$ ( $y$ ah-o) by Contraction $\bar{T}$, which is the Alwaso word for Satan or the Devil, that is to say, The Adversary, from the Inversion of the (Artistic or) Divine Idea. Yo, (the rowel short), means also, in Alwato, I (mrself), as in Spaniel! (rr in Italian Io), and Swedeuborg aftirms that the Individual proprium, the finite Self-hood, is the essentially Infernal Principle, or that which is most remote from and the most completely an Inversion of The Divine.
The following is, in short, a proximately complete list of the Alwaso namings for the Leading Personages and Conceptions of the Theological Domain.

## Y, W, H, with the Towel-Sounds.

Y signifies Spiritual Centricity, Unitr, (Integration), Selfhood, Personality, Pivotally Radiating as from a Sun-Centre or other luminous Point; (Absolutoid); see "Alphabet of the Universe."
W signifies Spiritual Differentiation, Balance or Balanced Vibration, Intercourse, Intercorrelation; (Relatoid); see "Alphabet of the Universe."

II signifies Sprint as such, diffused anत subtly permeating; Brentli-, Air-, Ghostlike; (cf. German Geist, Eng. gust) ; Sesquoid, Intermediative and in turn relational betzeen The Absolute and The Relative) ; see "Alphabet of the Universe."
II ( Yee), The Absolute God; The Omnipresent and Eternal God (Instantial); God in the Inmost Consciousness of every individial; God the Father, the One Sole God;-The Jewish, Mahometan, Socinian,

Unitarian Conception ; (cf. Yihowa, Jehovah.)

Nute. The God-Conceptions of the older and less leading Religions of the World, Hindoo, Chinese, etc., have never riven into the True Spiritual Domain signified by the Ambigu's (h, y, w), The Spirit-like Alphabetic Domain.*
$\mathrm{Ye}_{\mathrm{E}}(\bar{Y} a)$, the (Externally) revealed God; the God of Testimony or of "Evidences," (and John "came as a Witness to bear Witness," etc.-John, ch. 1, v. 7) ; God the Son of Christian Theology; the incarnated or Human God of the Orthodox Conception, Catholic and Protestant; (cf. $I \epsilon, z u$, Je-sus.)

Yrye (Yee-ye) (for $Y i n E$, or $Y e=$ Yi-and- $Y \in$ ), God as Father and Son, each personally and sensuously conceived of, in their mutual relationship; omitting the Holy Spirit as to any distinct personality; the Moyesian Perfectionist (?) and Mormon (?) Theological Conception.

Yie (Yee-a), the Sabellian Conception; the Son derived from and less than the Father.

Yei (Ya-ee), The Swedenborgian Conception; "The Lord;" subordinating the Unrevealed God (The Father) to the Anthropic idea of God revealed in Christ

Ya (Yah), The Divine Love (and Power) embodied and Impersonated; The God of Nature and Natural Theology; The Supreme God in a general sense, the Antithet of Yo, Satan, or the Adversary ; cf. the Hebrew Jah.

Yō, Satan or the Devil ; the Adversary; ( $o$ the antithetic vowel to $a$ ); see $\bar{Y} a$; he who, as the Serpent, (Omni-dimensional Progression, the Screwing, Contorting Composity of all Ways and Methods, characteristic of the Intellect), commended to incipient humanity, departure from implicit obedience to the First Word of God, (Gen.

[^1]ii : 17), from the simplicity of mere faith, and urgent Intellectual Investigation, the eating " of the Fruit of the Tree of the Knowledge of Good and Evil," the substitution of the Duismal, or Reflective, for the Unismal, or Credensive Method), (Gen. ii : 17 ; iii: 3 ); and who, speaking as the opposite Hypostasis of the Divine, (the Duismal Principle), and hence as one of the Personages of the Grand Primal Theandric Council which had proposed the Creation of Man in their image (Gen. i:26), uttered (as the Second or Subsequent Word of God)-first to the Intuition of the Woman (Unismal), and then, through it, to the Intelligence of the Man (Duismal)-this promise: "Ye shall not surely die; for God doth know, that in the day je eat thereof, then your eyes shall be opened [intellectual apperception]; and ye shall be as Gods, knowing Good and Evil," (Gen. iii : 4, 5.) Man accordingly did eat (or began to chew, c. 20,21, t. 136), initiating his new career, of investigation and reason, and in that day did "surely die" to the Primitive Eden Life of Simplistic Innocence, and did enter upon a new life of storm and trial and long-battling endeavor; while set, from an opposite point of view, he did "not surely die," but his eyes were opened, and, by the subsequent testimony of God himself (Ya), he became also as a God, by this very act of disobedience to the first command. " And the Lord God said, Behold the man is become as one of us, to know good and evil," (Gen. iii : 22). Herein, then, is the Complex Truth (Trinismal) from the co-aptation of the two prior oprosite Divine Utterances; the Reconciliation of God and Satan in the Complex Divine; of Good and Evil in the Higher ulterior Good; of Intuition and Reason, in the Composite Theo-logico-Philosophy of Integralism. Yo is predominantly, however, the lower (infernal) grade of Intellect; Conceit, rather than Knowledge ; (see Wau, or the Reflective type, whether Internal as Intuition, or External as mere Co-existences and Co-sequences.) This lower form of knowledge is angular and imperfcet, self-suggested and without teleologic applications; hence (perhaps it is, that) the popular instinct hi:s endowed the same being who is represented in the Scriptures under the Symbolism of the Serpent with Horns-the symbol of An-
gulism, the Cloven Hoof (side-by-sideness in the arrangement of Fingers) the symbol of Co-existences, and a Tail (end-to-end-ness in the succession of vertebræ), the Symbol of Co-sequences in Tine.

Yöos(Yō-os),Satans-Maseuloid, $\}$ Swed-
Yōas (Y Y -as), Devils-Feninoid, $\}_{\text {enborg }}$
$\mathrm{Y}_{\triangle \mathrm{U}}(Y a h-o o)$, God, in the aggregate of all the preeeding Absolute, Personal, and Arbitrismal Conceptions, ineluding even Yo, as the Impersonation of the lower and personally affected Intellectual Knowledge, mere Knowledge, (Monospheric), as distinguished from Wisdom (Wo, Comparological, Impartial, which see.)

## $1 \frac{1}{2}$.

$\mathrm{H}_{\Delta \mathrm{d}}$ (Hah-oo), (cf. Ger. Hauch, Breatr), The Holy Ghost or Spirit; see Auch below, Spirit, Odic Force. The Holy Trinity or Yihye, ( $=$ Yiye + Hau), of the Orthodox Christian Theology, Catholic and Protestant; The Father, Son, and Holy Ghost, for which $\mathrm{Y} a$ (jah) may ordinarily be substituted.

## 2.

WI. (Wee), God(s) in the Polytheistic Sense, Human Individuals and Qualities, or Attributes, deified.
We (Wa), Laws of Nature and Categories of the Understanding personified and aecepted as God; Abstraetoid or Logical Pantheism (Hegelian.)
$\mathrm{W}_{\mathrm{A}}($ Wah $)$, Nature, in substancive presentation, personified and deified; God uttered in Substance ; Abstractoid or Realistic Pantheism (Spinozan); An Oracle; Revelation; Utterance; The Dialectic (of External and Internal) God-Conception; (ef. Wa-to, a Dialect, a Language); externally, Lingual, or inscribed (in Vowels and Consonants); interiorly, the Divine Love and Wisdom; Spiritual Goodness and Truth; the rery God revealed in Worlds (Spinoza), or in Words, The "Word," or Scriptures (Swedenborg), both alike utterances, Out-erances, or Expressions.

Wo, "Logos," "The W ord," [rationally considered, see Wa,] John 1:1); Logicism, The Divine Wisdom, personified ; Inherent Necessity and Universal Law adapted to all Divino Euds; Self-existent,

Creative, Regulative, and Teleologieal Destiny or Fate; the Infinite "Idea" or TypePlan of Universal Being. The Logos (Wo) is inherently prior to Nature, but is rerealed to us, as Truth, through the Midwifery (Socrates) of Scientific Investigation (the analogue of Anatomy and Surgery), exercised upon the body of Nature, (the study of the Laws of Nature), Nature being "the Woman," or the Feminine impersonation contrasted with the Ordinary Theological Masculine Impersonation of the Divine, called God; (compare tho Formula "Father God," and "Mother Nature," by Andrew Jackson Davis); not revealed, like the current Theological conception, through "Inspiration," the Analogue of Breathing, and so of Habitual or Instinctual Life, and so of Physiology and Pathology. Logos or Law is the Bony Framework, and Personality and Love the fleshly environment of the idea. The Logos (W0) is the Abstract God (see-Tss), and is, in the sense just explained, the "Son of the Woman," (Rev. 12:5,) who was to be caught up to, and installed in the throne of God, and destined, as Seience, "to rule the Nations with a Rod of Iron," (Rev. 12:5,) that is to say with the definiteness and certainty of asccrtaiued Truth. See Logicism and Arbitrism.
$W_{\Delta U}(W a h-o o)$, The Total Omnivariant God-Coneeption of Rationalism, the Antithet of Yau.
Wyad (Wyau-oo), The Simple Combination of the Opposite Conceptions of the Divine, signified separately by $W a u$ and Yau, Duismal and Unismal, respectively; the resultant idea of the difficult, but not impossible, reconciliation of Rationalistic Theology and The Theology of Inspiration; a marriage which, when effected, results in Spiritual Prolifieation, "The Divine Operation, Efficiency, or Creative Energy:"
Hwau (Hwah-oo), The Combination of Hau with Wau, The Rationalistic and The Spiritualistie God-Conception, omitting Yau, the Personality-Conception, as is apt to be done by "New Lights" or Progressives.

## 3.

Hwyad (Hwah-oo), nearly unpronounceable, the Alwaso word for the Integral (all-
sided, exccedingly Complex and Difficult) Theological Conception-, God, in all the Aspects and Senses, of the New Catholic Theology; the Combination and reconciliation of Wau (the Rationalistic Conception) with Yau (the Personality-Conception) through the Intermediation of Hau, the Holy Spirit, (see Odic Force); the Infinitely Enlarged and Absolutely Universological Doctrine of the Holy Trinity,Scientific, Mediumistic, Inspirational, or Traditional, combined, $\left(2,+1,+1 \frac{1}{2}.\right)$ The utterance or the word (Hwyau) is a High Vocal Gymnastic Effort, especially of the Lips (see Universology), the difficulty arising from the tenuity and the complexity of the Combination of the Sounds; but the Complexity is only such as precisely to correspond with the complexity of idea which the Truth has convoluted in the knot of conceptions essential to a valid and complete Theology. It is the greatest mistake of the common mind to suppose that the Truth is Simple; it never is so, except in its Pure Abstract Elements. In any Extant Form or Substance of it, from the Point or Atom up to God, it is infinitely Complex.

## 0.

(Zero, the Antithet of the Positive Numbers.)
Auh (ah-ooh), Auch or auk, inversion of

Hau, Hauch-Negation of Spirit as an Entity, cf. Gr. ouchi, or ouk, (ou) not, no, not, ANx, the No-God of Atheism,-aukini = Atheism; -tni a contraction for -teni, a termination meaning a doctrine or theory as -ski means Science $=-$ Ology ; cf. San. tan, то stretch; Lat. tendo, the same, and Lat. ten-eo, то hold, whence Eng. tenets.

Even this final exhibit is only in the proximate and practical sense exhanstive. Vowel-Sounds are susceptible, like Colors, of an infinite variety of shades, each of which has, in theory, a distinctive shade of meaning; but like the prismatic colors of which they are analogues, the leading vowels are a very limited scale. The Consonants are analogues of the Prismatic Dark Bands. The less leading ones among the ordinary vowels, $o, u$, etc., and the diphthongs ai, au, etc., (see Universology), are here omitted.

The following is the Alwaso rendering of the first verse of the Gospel of John:

Na,tsal,ni, al Wo, n 1 Wo a sa Ya, n 1 Wo a Ya. L ste a, nah, tsahl,ni sa Ya. (Pronunciation:-Nah tsal nee, ah lwo nl wo ah sah Yah, nlwo ah Yah. Lstay ah, nah-tsahl-nee sah Yah.) English:-In the begiuning, was the Word, and the Word was with God, and the Word was God. The same was, in the beginning, with God.

## U.

Universology, The Science of the Uuiverse. The Science of Principles which are Universal, and which apply to all Parts, Domains, and Relations of the Uuiverse; (Lat. Universum, The Universe,) (t. 3, 835, 930) ; or the Science of those Universal Principles, which underlie and unify all the Sciences, applying equally within every Domain.

The Primordial Principles of Universology are UNISM, DUISM, and TRINISM, derived from the Head Numbers One, Two, and Three (t. 203, 2054.) But back (in a seuse) of these Principles, or surrounding and embracing them, more indefinite and vague, more broadly generalizing, more Philosophoid or in the spirit of world-wide speculation and conception, hence less Echosophic or exact, (less scientific), are,
also, the following Pairs of General or Universal Princip!es:

1. Ordinism, and Cardinisy, the Spirit of the Ordiual Numbers, and the Spirit of the Cardinal Numbers, The Ordinary, and The Transcendental or Cardinary respectively; 2. Integerisir and Fractionisir, The Spirit of the Whole Numbers, and the Spirit of the Fractions, respectively; 3. Positism and Negatisir, Positism, the Spirit of all Positive Numbers, as 1, 2, 3, etc., up to Infinity, (represented by the Absolute one), and Negatism, the Spirit of Zero. There is for each of these pairs a Third Term and Principle denoting the Composity and Cardinisın of the Two Principles coupled in the Pair, for which our existing meagervess of Language and Conception has denied any proper Namings; and the new technical
designations of which need not be repeated here; see -Ism, Cardinism, Integralism; Résumé under-Ism; c. 3, t. 226.

The Preceding three Pairs of Principles are the Least Definite Orders of Universal Principles, and for this reason, as Generalizing rather than Specific, may be denominated Philosophoid. Next above these or outward in the direction of Definiteness and Particularity, while yet also General, is another Pair of Universal Principles, INequism and Equism, the Spirit of the Odd, and the Spirit of the Even Numbers, respectively, constituting the basis of Scr-ento-Philosophy, which intermediates between Metaphysical Philosophy and The Special Sciences, (t. 471.) The Exactified Epitome of Oddess is found in the Three Terms of The Syllogism, A (the Larger) including B (the Lesser), B (the Lesser), including C (the Least), and A, (the Larger), merefore, including C , (the Least); which is the Essence of all (Cata-) Logic. The Exactified Epitome of Evenness is found in the Quasi-Syllogism of Geometry, $\mathbf{A}$ is equal to (even with) $\mathrm{B}, \mathrm{B}$ is equal to C ; A is, therefore, equal to C,-the Essence of all Mathematics, the Spirit of which is Analogic.

Inequism reasons from the Greater to the Smaller by the Ratio of Inclusion; Equism reasons, with equal facility, from the Smaller to the Greater, by "Parity (Lat. par, Equal) of Reasoning." See Création de l'Ordre-Proudhon, p. 86; (c. 1, t. 12); Vocabulary and Index, word Sciento-Pliilosophy; Logic, Analogic, etc.

Above, and farthest out, remain The Specific, Universal Principles (Representative and Particularizing of all the other Orders of Universal Principles, namely, Uxism, Duism, and Trinism. These are specially Scientific, (related to the Special Sciences) as contrasted with both Metuphysical Philosophy and Sciento-Philosophy.

The following Tabular View of the Principles of Philosophy and Science represented by these Origins of Number-the Fundamental Conceptions of Mathematies-and, in parallel Columus, the Current Namings for the Analogous Principles, the recognition of which has sprung up spontaneously in Philosophy and in Science, will add to the clcarer understanding of the subject. Read the Tabular Matter from below, upwards.

## UNIVERSOLOGICAL TABULAR VIEW-MATHEMATICALLY FOUNDED.

## Mostly <br> New Terms (with their Grounds). <br> I'ne Technicals of Universology.

TRINISM (Tertiism, Tritism), p (f.); b (v.) (3; 3d).
DUlSMI (Secondism, Deutism), $\mathrm{k}(\mathrm{sh}) ; \mathrm{g}$ (zh.) ( $2 ; 2 \mathrm{~d}$ ).
UNISM (Primism, Protism), t (s.) ; d (z.) ( $1 ; 1$ st).

[^2]Mostly
Old Terms (for analogous Ideas).
Current Terms in Plitosophy and Science.
INTEGRATION (Ultimates, Ultimation; Arto-Pertection).
DIFFERENTIATIUN (Medials, Sequentiation; Sciento-Rectification).
INTEGRATION (t. 210, 211). (Primals, Crude Nature).

The Tree; ngk, kw, = ; see -Ism, t. 1028, Index. The Mathematical Quasi-Syllogism (see above).
The Proportional, Ratio-nal ; mn, +- ; The False (or Perverse) detected. The Logical Syllogism (see above).
$u$ (ai), i, u, a, in The Ordinary, Practical.
$o$ (oi), e, o, a, in The (Cardinary), Transcendental, Theoretical. aū ( $=\overline{\mathrm{a}}, \overline{\mathrm{o}}, \mathrm{u}$, etc.) ; The Long or Eutire Sounds.
aù, The Short Stopped or Proken Sounds.
Tire Positive; Vowels (\& Conson.) t. 115,
The Negative; "Pause," "Spaces." $\} 263, \uparrow 42$.

Positism, at the bottom of the preceding Table, corresponds with Sound(s), Vowels and Consonants, and Negatism with the successive Silences interveniug, denoted by what the printers call "spaces," which equally with Sound or Sounds, constitute one of the Factors of Speech.

Next above, are the two pairs of Philosophoid Universal Principles relating to the Whole and the Parts (Objective and Subjective) of the Subject-Matter of the Uni-
verse, and to its twofold Matrix, Time and Space, Ordinal and Cardinal, respectively. These have Vowelism for their Analogue in Speech. (See subsequently Equism and Inequism.) The Vowels are employed with their general European Values, not as pronounced in English, the English pronunciation being exceptional, perverted and inconvenient. The key to this standard method of pronouncing the Vowels is exhibited in the following Tabular View.

## KEY TO THE PRONUNCIATION OF THE VOWEL-SCALE.

$\mathrm{i}=e e$ in keep.
$\mathrm{e}=a$ in paper.
$a=a$ in mare, or short in man.
$\mathrm{a}=a \hbar!a$ in far.
$u=u$ in curd, or short in cut.
$o=a w$ in $a w$-ful, $o$ in nor.
$0=0$ in noble.
$\mathrm{u}=00$ in pool, or short $u$ in put.

## DIPHTHONGS.

iu $=e w$ in few, or $u$ in $u$ nion.
ai $=a i$ in $a i s l e$, or $i$ in pine.
$o \mathrm{i}=o y$ in boy.
$\mathrm{au}=\mathrm{ou}$ in house, (Gcr. $a u$ in Haus.)

Note. The Scale of Simple Vowels here given is found to be fundamental-these in other words to be the Primary Vowels to the number of Eight; but the Universal Vowel Scale is then variously abridged, enlarged,

The Grand Universal Proto-Deteryinismus of Phoneticism (Alphabetics) and hence of Speech, is, the Vowels, the Consonants being the Secuudo-Deterninisuus, and the Syllable (the Elementary Word) being the Trito-Determinismus, the whole contrasted with Confused Sound, the Indeterminismus of Speech. The Vowels are in character Substancive, and the Consonants Morphic. The Grand Universal ProtoDeterminismus of Form is Dimensionality. (The Dimensions, as Length, Breadth, etc.), the Secundo-Determintsmos being Direction, and the Trito-Determinismus being Figure or Specific Shape; the whole distinct from Indeterminate Form, t. 509. So, The Grand Universal Proto-Deteramnismus of Number consists of the various Numerical Series, as Cardinal, Ordinal, etc.;
or modified, for different purposes, for the details of which occurrences see "Primary Synopsis of Universology," "The Alphabet of the Universe" and the "Universal Alphabet."

The Secundo-Determinisyus being The Functions of Positive Numeration (as The Sum and The Difference, etc.). The TritoDeterminismes of Numeration is, then, the Statement and the Operation of Sums, or Problems, which are the Specific Analogues of Figures or Shapes in the department of Form. All of these are contrasted with the Indeterminismus of Number (One, Many, All), t. 510.

The Inherent Meaning of these Vowel(and Diphthong-) Sounds may be cursorily exhibited as follows:

The Vowel-Sound i, the Central one, and the most slender, of the Vowel-Sounds, is produced by being forced through a narrow lengthwise groove made by hollowing the surface of the tongue into a tube, somewhat as a wire, in being manufactured, is drawn
through a small opening. It is, therefore, Lengthwise, Protensice (Forth-Stretching), or Fore-and-Aft-tending, in direction and character. It is, thus, the Analogue of the Dimension of Levath in respect to Form, and of The Ordinal (or On-going) Series of Numbers, in respect to Number.

The e, flattens the tongue, and even stretches the outer angles of the mouth, sidewise, and horizontally, and in opposite directions, (hinge-wise), looking to the Cardinal Points in the Horizon; see Cardinism. It is the Analogue of the Dimension of Breadth, and of the Cardinal Series of Number.

The a (it is not necessary always to preserve the same order in speaking of the vowels) opens the mouth wide and fills, as it were, the-Height-and-Depth (The Thickth-) direction of the cavity. It is as if a crayonsten or other stick were set up endwise between the jaws. This Vowel-Sound is the Analogue of the Dimension of Thiciete, the Diametrical (or through-the-middle) Dimension or Direction. Primarily and typically, it, (a), denotes Diametrical Direction in the Standard or Standing Sense, the Relative or Ordinary PERPENDICULAR adjusted to some Base Line, or Base Level Plane. It is the Analogue, Numerically, of the mere Cumulation of Units, the Substance-Matter of Sums, Thickth (Perpendicularity) corresponding with the Heap, Pile, or Cumulus, as the Type, par excellence, of Substauce.
This Dimension corresponds with Substance, or the Brazon, as that within the Unit which is distributed by Fractionizing or Sectionizing, and so of that within the Individual which is amenable to Ethical Laws, (c. 5, t. 5, t. 314). Sociologically, it holds a certain relation to Substance or Individual Wealth, and with Res Publica, or the wealth of the community-the Commonwealth.
The $a$, which is characterized by English grammarians as the flat a, holds the same relation to Horizontality, the Flat or Level Surface (Basement Membrane) etc., and to Thinth the antithet of Thickth, which a holds to Horizontality and Thickth. If $\mathrm{a}, \mathrm{bo}$, the a -body, be a Cone (the scientized Heap or Cumnlus) then $a$, bo is the Truncated Cone, which by repeated truncation becomes thinner and thinner till it is
a mere surface-whence $a$ signifies generally Attenuation in the several seuses of that word.
Length, Breadth, and Thickth (i, e, and a) are the three true or proper Dimensions, the three primary Axial Determinations of Extension; what remains to be represented by the remaining vowel-sounds is more strictly Aspectual Presentations, such as are denoted by the terms Up and Down, Fore and Aft, Rigit and Left, (and certain more special inclinations between these, indicated by rarer or exceptional vowels (see Primary Synopsis, t. 95). In this sense o denotes Up, $u$ Down, o Fore or Front, a Back, ai Left, and oi Right.

The grounds upon which these assignments of meaning are made cannot be fully expounded here. Sce Primary Synopsis, t. 110-120. As Aspectual Presentations these remaining vowels, after the more Elementary i, e, a, will receive especial consideration elsewhere. At this point, they will be, themselves, also treated as Dimensions, in an inferior sense, or as $\mathrm{Di}-$ mensions of a Secondary Order.

It requires close thinking to reveal the fact that The "Reality" of Form (its voweldom) consists of these Diameters and Aspectual Presentations, of which the Bulk or Magnitude and the Configuration or Figure are then the "Limitation," (the Consonantality). The Reality of Substance and Body is known technically with tho metaphysicians as "that which is given," namely within the Beat or Domain of Existence. Per contra, the Reality of Form or of Limitation itself, which is antithetically related to Substance, consists of Diametricism (through-the-centre-ism-that which is inmost) and of the way in which it gives or presents itself outwardly-the Faces or Facets (of which Outline and Figure are, in turn, the Limitation). A subtle testimony to the accuracy of this analysis occurs in the French phrase donner sur, To gIve upon, which is applied to the front or any other outlook of a house, as les fenétres qui donnent sur la rue, the windows WHICH LOOK OUT UPON TIE STREIT; donner sur le nord, to LOOK or face towards the Nortir-literally, which alve upon the street, to GIVE upon the Dorth.
The bastard Vorrel-Sounds $u$ and o repeat the primitive i and e in this broader
and raguer sense; $i$ and $u$ coupling with each other Protensionally, and e and o Extensionaily.

The so-called Natural (or Neutral) Vowel, $u$, is the least modulated of all the VomelSounds. It is the result of merely permitting the sounding breath to flow, without effurt, through the un-tensed rocal canal of the entire mouth. Whence it is elongate, like i: but unlike it, it is flucional, lax, ucatelike, and pre-eminently liquia. This Vorel is the common solrent of all the other Towels. All of them fall back into it, especially in English, when relieved of the accent, (or affected by $r$ ), as in fir, confer, honor, myrrh, etc. It is the Analogue of the Stream or Carrent of Ture, the Forth-snd-Downward-teuding Dimension or Direction, on which we mar bestow the name of Ppopension, (pro, fortif pendo, to Hasig, as the tendenct of fluid to find a lower level.) It is the Analogue of this, sis a Queasi-Dimension, in respect to Form, and of Fiuents in Mathematics.

The $o$ is the most expanded or mout $h$-filling of all tine Vomel-sounds, but has a general upmard tendener (the opposite of $u$ ), Which gives the peculiarly solemn and impressive effect to the mords ave and aroficl, as if there were a lifting of the Voice towards Hearen. It is the Analogue of The Oierarching Dome of Space, contrasted with the Flus of Tare ( $w$ ), and hence of the Firmament, braceu as it mere by the Carpentry of the Dome; of the Quasi-DIMersion Thich may be named Supercircumferentiality, (lat. super, AEOTE; circum, AROUSD: JETRO. TO CAPRT, or NAEE TO GO); and finalle of Corstants, or The Permanent or changeless Numbers, in Mathematics.
Finally, the $o$ and u reproduce the $u$ and 0 . in a Purer and Clearer, less Vague, and consequen-ly More Periect Manner. The o rounds and moderately projects the lips, exhibiting a Clock-face or Disk-like Protuberance or Prominence, like the Prospectire, Froutoscopic, Mirror-like or Pounded View or Portion of the Open Skr, which is seen at any one time, as me look rut upon the morld. The o is the most Orert and Presertatire, or Obrious, as to its Contormation, of all the Sonnds, (whether Vorrels or Consonents.) It is that to the shape of which we first direct the attention of the child in giving him an idea of the
proluction of Sounds. Its significance is Prospect(ive), Aspect, Cleap Tiew, Reflect or Pieflesion, at Rigit-Augles, or in Full-Face Presentation to the Face of the Observer, mirror-like, or glassy; The Fuce of Day, Day: Idea, Idesi; Theory, (Gr. theoreo, tu Loor at, NIET, birold.) It repeats the Dome-like Vacaney of the $o$, as the adjusted Front-face or Aspect of the Dome repeats the Dome. It denotes parallel Fuce-to-face-ness with the Observer, Refiexion, Clarimde, Ideality. It is the Analogue, Dimensionally, of the Double and Exact Quasi-Durcrsion: produced by $a$ Perpendicular crossing the Horizontal ato right Angles, making the basis of all Pure Geometrical Adjustment, on which mar be conferted the term Frospective, (as contrasted with Perspective, see below); and then of the Pure or Enapplied Mathematics generally.

The u protrudes, while it contracts, the Lips, somerrhat more than 0 , into a proper Crlinder, Tube, Tagina, or Sleath; Con-rergo-Dirergent, like the Interior Persrectire of the Nare of a Church, or of any Centering Passage-mar. Its Signifcance or Symbolism is a Double Ircunsm, the Wedge-Form, in Adaptation to Mrcmatisy and Morement; Declension, or Full-ing-azay from Puッe Linear Relation or from the Full-Face Presentation of o; Dethation from Clearness, hence Obsctritit as of Nent: Prartice or The Practical; (with its mixed Contingencies or Indistinctness.) It repeate, in an especial, and more positive or real sense, the Currental Protension of $u$. It is the Flow or Flux of Time infused by Actuality, Eventuation, Eseor Morement; Practice as contrasted with Theory; The Erperiential as against The Pure Ideal. It declines from the full-faced-ress of the 0 , (as $u$ declines from 0 , and $a$ from a). It counter-parts the 0 : is analogous, therefore, with Turbidity. Shadow, and Night, and Namerically, with the Applied Mathematics, made trrbid or Impare, darkened, as it mere, b! considerations not purely Mathematical. It denotes, in respect to Form, withdraveing into the Distance, through, as it were, a Vista of Obscuritr and Mrstery; Investigation and Eeverienticlism, as contrasted with Pire Theory; The Tar. of which $o$ is the Gate: the Doing, of which o is the IUCal Conception, and the Enticing

Invitation. As a Dimension, it is, therefore, Perspective, and is the Analogue of the Impure Mathematies.
The Diphthong iu combines the slender centering i with the tubular $u$, as Piston and Cylinder ; or like the Serpent with his tail in his mouth, the Egyptian symbol of Eternal Generational Succession. It has a general relation to Coition, Copulation, Conjunction and Generation, and also to Median Lines or Linear Centres. It is allied with the Gnomon of a Dial or with a Perpendicular let fall from the Apex of an Isosecles Triangle, with the legs of the Angle equated in their divergency on either side of the Radius: or with a Radius Vector, which is at each successive instant such a Radius relatively to a new Isosceles Angle ; and hence with the Equatorial Idea.
As a Dimension it may be denominated Ecliptica-Equatorism. It is, then, the Analogue of the Gencration of a Line by the Movement of a Point, but Typically and representatively, of the Ecliptical Line, by the Successive Points occupied by the Sun in his passage along the Ecliptic, his track, diverging alternately to the opposite Sides of the Equator as the Central or Median Cleft or Cleavage of the Planet. The Corresponding Numerical Analogue is the Calculus of The Generation of Lines by the moving Point, and typically, of the Sun's Track.

The ai combines the a, for Substance or Matter, and hence weight, with i for Centre, and refers to the Centre of Gravity or to the Solid Matcrial Globe-Form, as contrasted with the Vacual (mere-Space) GlobeForm represented by oi. (See below, and Fig. 3, Diagram No. 44, t. 653.) It is the Analoghe of Omin-dipectional Perpendi ularity, (or of the Convergency of all Relative Perpendiculars upon a Common Centre); or of, in other words, the All-Sided Convergency of the Lines of Weight. Hence it denotes the Solid Orb or Planet; the Earth or Footstool; and is the Analogue of The Fundamertal or Lower Mathematical Domain, (Instance the four Fundamental Rules of Arithmetic.)

The oi combines the ofor the Expansiveness of Space (in its simple appearance a Dome overhead, see $a$ ) with i for Centre, (implying the completer globosity of Space around a Centre). It denotes the Omni-directional Expanse of Space surrounding the

Atom, or Planet, or Individual, which or who occupies the Centre; or the All-Sided Convergency of the Lines and Concentric Planoids (Onion-like, "The Spheres,") of the Immense Globe of Space, upon its own Centre, which Centre is, howerer, situated - Absolutely viewed-at every Point happening to be thut observed, or that of the Observer; independently, however, of the governing circumstance of Weight or Gravity involved in ai. Relatively, some given Point may be The Centre of Space par excellence, and by Analogy should be so.
The oi is the Analogue, Dimensionally, therefore, of Omidipectional Exparsiveness, or Divergency, and of the Allembracing Heavens; and, Numerically, of the Higher and Illimitable Mathematics.
The au unites The Substancive Reality (Substance) of a with The Practical Movement or Wedge-like Propensity to Movement, of the $u$. It denotes the Individualization, but, at the same time, the Aggregation of the Neanings of all the Preceding List or Scale of Vowels and Diphthongs, hence Omni-varia-directional Existence-and-Derelonment; still, however, as Indeteraftnisurs, or as The Reality, as distinguished from the Limitation, of Being ; Limitation requiring for its exposition the ConsonantSounds, which constitute The Detrrminismus of Speech. The an is the Analogue, Dimensionally, therefore, of All the Aloce Described Dimensions, first differentiatcd from each other, and then recombined. For this Omnivariant Compound Dimension we may adopt the technicality Omai-fariaDirectionality; or, in respect to Numbeis, Omni-varin-Seriation. It should be constantly borne in mind that The Numerical Series, as Cardinal and Ordinal, Integral and Fractional, etc., are the Anctlogues of Lines of Direction.

The following Tabular Viers, or Diagrammatic Table of the Symbolic Forms of the Twelte Radical Dimensions of Form, (a portion of the Alphabeties of Form), with the Twelve Vowel-Sounds which form the corresponding class of the Radical Elements of Speech (a portion of the Alphabeties of Language), will aid the student in his first apprehension of this New and Recondite Development of Science, the Echo, Correspondence, or Scientific Analogy, of the Elements of all the Departments of Being.

## (DIAGRAMMATIC) TABULAR VIEN. No. 1.



Sidewiseness, Side-by-Side ness; (BIEADTH.) (The Absolute Horizontal.)


## Grand Central Elevation; Standardisa; (THICKTH.) <br> (The Relative Perpendicular.)



Grand Level; Strface-Level; (Thinth.)
(The Relative Horizontal.) (Galvanic.)


General Elevation; Swell ; Done-doas.
(The Superincumbent Firmament of SPACE.)
(Supercircumferentiality-Acrial.)

## Gradation; Degree: Ctrrental ©cbsidence.

(The Flux or Flow of Time-Aqueous.)
(Propension; Successive Water Levels.)
See Note 2, at the End of this Table.


Non-Inclinisar; (Af-inclinism); Recti-positivai.
(Proto fuci-Dimensiouality.)
(Prospective, Frontoscopic,--Luminous, Clear.)


Inclinism; (Bininclinism.)<br>(Convergo-Divergent Cruciality.)<br>(Perspective-Shaded, Obscure.)



Miedianism; (Equatorism.)
(Midway, the Equatorial Cleavage and Produced Line.)
(Nuptialism; Unition of Hemispheres.)
(t. 322-323.)-Calorific.


Subdominance.
(Feminoid Type of Structure.)
(t. 990, and Egg-Diagram, do.)


Superdominatice.
(Masculoid Type of Structure.)
(t. 990, and Egg-Diagram, do.)

Fig. 1.
Fig. 2.


Omnivaria dimensionality.
(Résumé of all the Dimensions.)
(Representatively The Serpent(ine).
(Elaborately The Human Figurc Outline.)

Note 1.- From the Centre of the Earth every Radius going out from it is Perpendicular, no matter what its Direction may be. This is what is meant by the Absolute Perpendicular. It is the same with Radii from any Centre, and, in fine, with any Line viewed or considered
in its Lengthwise or Protensive Direction or Aspect. It is then Perpendicular to the point from which and to which it extends. Absolute Perpendicularity may, therefore, be defined, (with some danger of shocking the Mathematicians) as Perpendicularity to a Point, while Relative or Ordinary Perpendicularity is Perpendicularity to a Buse Line (or Plane). Absolute Horizontality holds the same relation (mutatis mutandis) to Relative Horizontalitr.

Note 2.-These two Vorrel-Sounds, $u$ and $o$, together with some minor related shades of Sound, I denominate Bustard Vowels, and represent them by the Bastard or Italic Letters. So the Quasi-Dimensions which they represent are Bastard or Neutral Dimensions, or rather Aspects, of the Space-and-Form Domain. They are, therefore, only admitted to rank among the Dimensions by a kind of license, somewhat as we speak of the Neuter Gender in Grammar, as if it were really one of the Genders, whereas the expression means, literally, of Neither Gender. The following Seriated Erolution of the two Varieties of Symbolic Form which are Analogues of these two Vowel-Sounds, derives them from a single Section (or Cutting) of the Great Globe of Space, as by Lie Plane of the Horizon.


Note 3.-Strictly, or elementarily, the three Pirotal Vowels are i, a, o, (or u, see mention of the Vowels under Theology, under -Ology) ; but, actually or practically, (in Elaborismus), The Grand (working) Trinity of Vowels is a, $o, u$, (see w. Tikiwa). These are, in turn, collectively represented by the Final Grand Diphthong, au, ( $\mathrm{ah}-00$ ), which thus becomes representative, also, of the whole Vowel-Scale, or sums up, in other words, all the vovells from $\mathbf{i}$ to u inclusive, in this single expression. Accordingly, all the Preceding Elementary Dimensions (and Quasi-Dimeusions) are summed up and represented, in the Final Complex and all-Representative Dimension signified by this Diphthong. Length (i), Breadth (e), Thickth (a), Procedence (u), etc., culminate in the Undulatory Spiral, the Trpe of which is the Serpentine or the Convoluting and Contorting Form of the Serpent, interpermeating (Co-existentially and Co-sequentially) all Existence whatsoever, as the Rational Element of Being, (see Fö under Theology, under-Ology). "Now The Serpent was more subtle than any beast of the field which the Lord God had made." (Gen. 3:1). The Scrpentine is therefore the simplest abridged Symbol of this Dimension, indicative of Undulating and Contorting Movement of the body along the Median Line, or of the Ecliptic along the Equator, in the Fructifying impregnation of the Earth by the Sun. The more Comples Symbols (Fig. 2 and 3) exhibit the Particular Symbols of the Primitive Dimensions more explicitly, in combination, and evolve the general outline of the Human Body.

These Geometrical Types have, then, their Numerical Analogous Types, as preriously described, and their Lingual Analogues (The Vorwels) as both described, and as shown, in the Table. There are thus several Analogous ranges of fundamertal idens, which relate, in other words, to Form, to Number, and to Language respectively. Language is merely the Interpreter of the
other two. Nanber and Form (Arithmetic and Geometry) are the Fundamenta of Mathematics, as the Mathematics are The Fundamentum of all Science. Precisely these Ranges of Ideas, the Origins of the Muthematics and of Speech, in a general or Philosophoid Sense, are, therefore, a very elementary field for Comparology or Analogy. Let us now assume $W a$, as a root,
to denote Language, Numer, (Noom-ār), for Number, and Morphe, for Form, (the account of the claims of these roots, or their justification, must be deferred), and then
by Prefixing the termination-io, (pronounced ee o) nearly synonymous with -ismus (see -Ismus), the Following Series of Alwaso Words will be evolved.

## TABULAR VIEW Ño. 2.

## Lingual; Towel-Alphascéic Dornains.

Wa-i-io (Wal-ec-ee-o), ctc.
Wa-c-io
Wa-a-io
Wa-a-io
Wa-o-io
Wa-u-io
Wa-o-io
Wa-u-io
Wa-iu-io
Wa-ai-io
Wa-oi-io
Wa-au-io

Morplic Dimensions.

Morf-i-io
Morfe-io
Marf- $a$-io
Morf-a-io
Morio-io
Morf-u-io
Morfo-io
Morf-u-io
Morf-iu-io
Morf-ai-io
Morf-oi-io
Morf-au-io

N'umerical Series or Domains.

Numer-i io.
Numer-e-io
Numer-a-io.
Numer-a-io
Numer-o-io.
Numer-u-io
Numer-o-io.
Numer-u-io
Numer-iu-io.
Numer-ai-io.
Numer-oi-io.
Numer-au-io.

Wiio means, really, all the i- (ee) vowel department of Language; what the typesetter has before him in his i- (ee) box, in his case. This is the Lingnal Analogue of all Possible Numbers in the Ordinal Series, and of the Dimension of Length in respect to Form ; and so through, in respect to all the words in the three columns. Change the terminations to $-t a$ or $i a$, and we name the Abstract Principles, reigning in these Domains. nearly as by the use of -ism and -Itr. (See-Ism.) A thousand other varieties of words are built of these same materials, exhansting, in representation, all the possible demands of Analogy, in connection with these fundamental ranges of Idcas.

It is to the Vowels, therefore, The Lingual Indeterminismus, to which we are to look, for the formation of Alwa(to)so terms, to denote The Dimensions of Space, The Morphic Indeterminismus, and The Numerical Series, The Indeterminismus of Number; the Coincident Subdivisions of each of the Three Domains being, in accordance with the Principles of Universology, Analogues of each other. The Meanings Analogous with the Vowels, in these Two Departments, Form (Dimensions, Indeterminate Form), and Number (Numerical Series, Indeterminate Number), may now be tabulated as follows :

TABULAR VIEIV No..

1. Alphabetics.
i, (ec,)
e, (a,)
a, (ab, )
$a,(a$ in mare, man, $)$
2. Form.

Lengti, Protension, Fore-and-Aft-ness.
Eneadth, Side-wise-ness, (Extension, Level.)
Tuiceti, Height and Depth, (Gravitation.)
Thinth, Inclination, (Tapering to an edge, Diagonal.)
3. Number.

The Ordinal Series. (t. 155.)
Tife Cardinal Series.
The Fractional Series.
The Intfaral Series. (The Interspaces combining the Parts.)

| 1. Alphabetics. | 2. Form. | 3. Number. |
| :---: | :---: | :---: |
| $u,(u$ in curd, but, | Propension, forth-and-down, as the Flux of the Fluid in the Stream. | Fluents, (Fluxions) among Numbers. |
| $o$, (avo in awful, ) | SUPRA-CIRCUM-FERENTIALITY, Convergo-divergent Ascension, Dome-like, (braced and standing) ; as of Aerial Edifices or Constructions. | Constants, among Numbers. |
| o, ( 0 in pole, | Prospective, Frontface-ness, (Clock-face, Speculism.) | The Pure Mathematics. |
| $\mathrm{u},\left(\mathrm{OO},{ }^{\text {) }}\right.$ | Perbpective, Vaginism, (Vista.) | The Applied Mathematics. |
| iu , (ew in fero, | Pistona-Cthindricity. | Mathematical Generation. |
| ai, ( $i$ in pine,) | Onini-Perpendicularity, (Earth, Pediment, Basis.) | Mathejatical Fundamentism. (First Rules.) |
| oi, (oy in boy, | Onat-Circtim-ferentiality. | Mathematical Expansiontsm. |
| $\mathrm{au},(\mathrm{ah} 00$, ) | Omni-varia-Circcas-ferentiality. | Mathematical Omnivariant Indetermintsyos. |

These same stems stripped of all Prefixes and used in their most Generalized Meanings furnish the namings of our most General and Vague, but yet most inclusive and important Conceptions of the divisions of the Universe of Space; such as Earth,

Heaven, and Hell. The h-sound signifies Spirit, (breath, halitus), and when prefixed determines the meaning as Spiritual rather than Temporal or Mundane. The following parallel Series of leading Cosmical Ideas result.

## TABULAR VIEW No. 4.

## 1. Mundane.

Tio (Ee-ee-o), The Absolute (World.)
Iio, (etc.), The Relative (World.)
Aio The Ether(ial) World.
Aio, The Material World; The Earth; Mundus.
U(h)io, The Transient or Temporary World; Huio, Helx ; The Hells.
Sub-lunary, downward-tending. The
Earth beneath; Abdominal.
$O(\mathrm{w})$ io, The Permanent or Eternal World; The Astronomical Heavens, above.
Oio, The Theoretioal, or Ideal World; Speculative, Trauscendental, Cardinary.
Uio ( $u=00$ ), The Practioal or Real World; Commonplace, Ordinary.
Iuio, The Cosaogonio World; The World of Conjunctures, Epochs, Climacterics, Generations, etc. Periodic Impregnations and Births, or Creations. "Pangenesis."

## 2. Spiritual.

Hiio, The Intettional (World.)
Heio, The Rational (World.)
Haio, Hades.
Haio, The Natural (Spiritual) Heaven(s.)

Hoio, Heaven ; The Spiritual Hearens.
Hoio, The Drvinf Human, Ideal, Pure, or Typical Human World, (Ho-li, or Holy.) Huio, The Actual (sin-stained) or Impure Human (World.)
Hinio, The Extatic World, or World of Bliss ; Swedenborg's Idea of the essential nature of Celestial happiness, as consisting of Espousals, Exquisite Conjugiality, and Perpetual Spiritual Prolification.

## 1. Mundane.

Aiio, The Earth-W orld, ensphered; or the Uliverse of Orbs, and itselt' as an Orb of Matter, pivoted on a Centre of Gravity ; like the Earth-World.
Oiio, The Circumambient Space-World, enclosing the Earth-W orld; or The Unirersal Globe of Space which repeats that idea, The Astronomical Heavens, aroind. (t. 000.)
Auio, The Universe at large, valguely differentiated and distributed into all the (abore specified) Generalized and Indeterninate Aspects of Being, these all unified, by Combination, into the larger Univariant Composity; The Universe, or the World, in the most Indeterminate Sensuous and Vague sense.

## 2. Spiritual.

Haiio, The World of "Ultimates." The Outer Material World from the Interior or Spiritual Point of View. The Footstool ; The Pedimental World.
Hoiio, The Celestial Heavens, (Spiritual.) The Complete, or Pivoted and Cardinated Omni-radiant and Omni-conspherical Heavenly Order.

Hanio, The whole of "The Lord's" Dominions, Celestial, Mundane, Intermediate, and Infernal, distributed and yet united, in the larger Composity of the Divine Plan, Speculatively, Dogmatically and raguely conceived of, rather than scientifically defined.

The following table shows the same roots with the termination -ma, to denote, Mass, Substance, Wealth of Materials.

## TABULAR TIEW No. 5.

Ima (en-mal), Entity ; Force centering the Monad, Vital Energy.
Ema (a-mah), Relation ; Lateral Adjustment; (Lat. re, and Latus, Sịde.)
Ama ( $a$-mah), Ether; The Second or Refined Form of Matter.
Ama (ah-mah), Matter ; The First or Gross Form of Matter.
Uma (uh-mah), Temporal Matter(s)-related to Tmene, (Sublunary $=$ under the Moon.) $\}($ c. 2, t. 9.)
Oma (aw-mah), Spiritual Matter(s)-rclated to Space, (Supernal.)
Oma (o-mah), Theory ; Pure Abstract, or Ideai, Being.
Uma (oo-mah), Practice; Mixed, Turbid, Obscure, Dub:ons, Eventuation.
Inma ee-oo-mah (Experiexce(inent); Vital Energy(i) penetrating the closed but opening passage-war of Life(u); the Pcrpetual Orgasm of Existence.
Aima (i-mah), Ground; The Nucleus or Solid Core of Existence.
Oima (or-mah), Entironyent.
Auma (ah-oo-mah), Materials, Protopragmata, F, Substancioid Elements of Being.

The Sciento-Abstract Conceptions, primarily or fundamentally Uniss, Dusas, and Triniss, and the Determinismus of Number, (tiae actual naming of sums by their constituent Numbers) call into requisition the Consonant-Sounds, which must be summarily dismissed here, with the single remark that all Consonant-Sourds resolve themselves upon Ultranalysis into the $t, l$ and $p$, which are Unismal, Duismal, and Trinismal, respectively. The $t$ denotes the uninn or conjoining of Distinct Units, (the Union of Units in.to Unity), k the cut or di-
vision bettreen Units (or parts of a Unit so converted into new Units, the Division of Un-it, or Un-ity into Un-its)-both Elementary Ideas; and $p$, at the Lips, the Head of the Mouth, denotes the Cardinism of the Meanings of $t$ and $k$, in a hinge-wise Mikton or Compositr, Univariant; (tho Separation and Union, in this Contra-posited double type of existence; the Cardinated or hinge-wise relation of Unition and $\mathrm{Di}-$ rision, $k+t$ ); see -Isar, Cardinism, and Univariety; and "The Alphabet of the Universe."

## THE VOWELS NUMERICALLY; IN DECIMAL NUMERATION.

The Order of the Vowels is varied almost infinitely to subserve different uses, but always in accordance with an underlying law of Analogy, which is sometimes obvious, and sometimes waits to be discovered. Used to denote Decimal Numeration, as in Chemical Nomenclature, for example, a Nine-Vowel Scale is required, with also a sign for Zero, (a Decimal Scale.) In the Eight-Vowel Scale, best adapted for printing the English, and for the General Lingual Basis, (carried up to 12 by the 4 common Diphthongs, see the first Tabular View), the bastard vowels $u$ and $o,(u \hbar$ and $a w$ ), and also the bastard vowel $a$ ( $a$ in man, mare), are admitted, and these occur in the middle of the scale. But to constitute the Decimal (twice-five) Vowel-Scale,
the 5 Pure Vowels a [ah], e [a], (i [ee], o, $\mathrm{n}[00$ ], occur first, as $1,2,3,4$, and 5 , respectively ; then 0 and $u$ (in this order) for 6 and 7 ; and finally $\bar{u}$ (Fr. u), and $\bar{o}$ (Fr. eu in leur, and Ger. œ in Goethe), for 8 and 9. The k (for cut-off, exclusion) following and adjoined to the vowels is then Zero, so that ak is 10 , ek is 20 , etc. But since ü and $o$ are un-English Sounds, those who do not know them, or who find them diffcult, may use as substitutes (y)iu for ü, 8 , and ai for ö, 9. The following Schedule exhibits this Decimal Vowel-Scale with the Numerical Values of the Vowels and their Geometrical Types with some slight modifications of these last, the grounds of which, generally, it is unimportant to explain.
(DIAGRAMMATIC) TABULAR VIEW No. 6.


A, One, Stbstance, Materiality, Natural Reality:-a,bo, a Heap, Pile, Cumulus.



> E, Two, Relation, Assistance (Ad-sistence), Adjunct-Thing(s);-e,bo(s), Wing, or Wings.

Note. The diphthongal ie, bo, combining these two vowels, has for its Form-Type The Winged Globe, a symbol of some special importance.

I, Three, Exisenoe, Entity, Thing;-i,bo, a Globe, or Solid Sphere, (bo for body), but, typically, the Globule or Atom; i, bo, a Prolate Sphere; í,bo, an Oblate Sphere; i,bo, a sherd or frace ment (of a sphere.)

Note. If the Perpendicular or Lengthwise Line be adjusted to the Axis of the Eye, it appears, as a Point, the Analogue of the Atom or Globule ; hence Length is allied with Entity, Being or Thing.


O, Four, Form Front View, Prospect, Aspect; - o,bo, a Face or Front Aspectual Presentation; Prosopon, Countenance.


U, Five, Movement, from Inelination; Shedding, Shading, etc.;$\mathrm{u}, \mathrm{bo}, \mathrm{a}$ Cone ; $\mathrm{u}, \mathrm{bos}$, the Nappes of the Cone.


O, Seven, Bi-Trinacria, Significant of Space;-o,bo, Canopy, Cover; over-archiug, over-shadowing.

U, Six, The spacie Heavens dissolving into Rain and Ocean, Tmes, $=$ Weather;-u,bo, basin, (pelvis), matrix-and-fluidity-Container.

(Y)iu-like $u$ in union (ü), Eight, Event-like Form; Incident, Excitation; iu,bo, Thallus. (Compare Diagrammatic Tabular View No. 1, pp. cxi and cxii).


Ai, (̈̈), Nine, Space-and-Time-Like Form, embracing gravity or gravidity (pregnancy);-ai,bo, Uterus-and-Vagina, Space, and Time-Type (with feetus) for oi and ai.

-k, Zero, Exclusion; Cut-off, (so directly, although inversely it is Inclusive also) ; thus ak, ten; ek, twenty, etc. For the Higher Numbers, the Vowels are repeated, with a Comma between; each Vowel uttered deliberately, and, as it were, separately, thus: a, a, Eleven, a,c, Tivelve, $\mathrm{a}, \mathrm{i}$, Thirteen, a,e, i , One IIundred and Twenty-Three, etc.

The Echo of Sameness, shown by the Distribution by Scales (as above, following the Vowels, with such variations of order
as may occur), in Different Domains, and as between Steps of the same Grade, in the different Scales, is a sample merely of what
holds good all the rray from this Deep Region of Analytical Generalizations, (t. 1010-1012) npward and out to the minutest twigs of Detail, in all the different Departments of Being, the Classification of which, in the Inninitely Varied, Far-reaching and Univariant Sense, will be the Elaborismus of Unirersology, and its Nomenclature the Replete and Infinitely Exuberant Focabulary of Aluato. It is this Identification, in Origin and Development, belireen the Universe of Actual Details (Material and Mental) and the Corresponding Details of the Intrinsic Word-World Thich is to name them, (the Discorery of which furnishes Alwato) which renders this Dirersion to Lingual Considerations appropriate to a definition of Universology.

This slight illustration of Alwaso wordbuilding, and of the Principles of Alwato, is cromded in at this point to atone in some measure for the omission of this subject in the body of this work. It is of course lacking in fulness of demonstration, but will be at least suggestive, and may sustain the cxpectations of the reader until the publication of more complete expositions of the

New Langnage. See in connection Psychology and Tikiwa.

As regards the popular acceptance and adoption of Alwato, in the World of Speech, that will provide for itself; for the ideas themselves, in their largeness of meaning, on the one hand, and in their minuteness and exactness of meaning, on the other, in their infinite rariety, and in their absolute necessity, for daily and hourly expression, when they shall have once been awakened in the mind, are such that there is no other possible method of naming them, than by the use of the precisely analogical Alwaso terms. The New Language can, therefore, no more be dispensed with by the thinkers and talkers of the future, than Science or Art can dispense with their appropriate apparatus and implements. Alwato equally, therefore, with Science, and pre-eminently, Cnirersal Science, speaks not as the Scribes (arguing to convince), but as one having authority. It does not say "by your leave," but speaks apodictically and authoritatively. It will be adopted simply because it cannot be dispensed with.
Cranology, The Science of Celestial Phenomena, Astronomical, (Gr. Uranos, Heaven.) (t. 338.

## -OLOGIC(AL.)

-Ological, (-alogical, -logical), Adj., end- relates to the corresponding Science, the ing for -Ology; or signifying that which designation of which ends in -Ologr.

Alphabetical Aprangement tader -Ologic'al) of Words ending in -Ologic(al.)
A.

Arbitrismological, relating to Arbitrismology. C.

Comparalogical, relating to Comparology.
Coszological, relating to Cosmology, and
the Doctrine of the World as contrasted with Man and the Mind within.

## E.

Exactological, relating to Exactology.
Elementoloaical, relating to Elementology.

## I.

Ideologioal, relating to Ideology.
L.

Logicismological, relating to Logicismology.

## M

Massological, relating to Massology.
Morphological, relating to Morphology.

## N.

Numerological, relating to Numerology.
Neurological, relating to Neurology.

## O.

Ontological, relating to Ontology.

## P.

Psychological, relating to Psychology. Physrological, relating to Physiology.

## S.

Soomoloaical, relating to Sociology.

## U.

Universological, relating to Universology. Uranological, relating to Uranology.

Om, or Aum, the Logos of the Hindoo Phil- Omntvaria-Directional, Extending in all osophy; see Logos.
Oyne vivuns ex ovo, (Latin), every living Thing comes out of an Egg; et omne vivum, and every thing is living, t. 991.
Omi-Dmensionality; sec Omni-Directional.
Oymi-Directional, extending in all directions, from some common centre. (Latin), omnis, all, and directio, Direction.)

Directions, not from any Common Point, but in all the senses of possible Direction. Omivaria-Directionality, The Differentiation and their Aggregation of all the Special Dimensions; see Universology, under-Ology.
Ocen-tarlant, Variant in every aspect and particular; Variant to the utmost, or to tho Infinite Degree.

On n'a Droit que de faire son Devoir, (Frencil), No oive luts uny Right except to do his Duty-Cornte.
Ontology; see-Ology.
Operology; see-Ulogy.
Optimism; see -Isy.
Optinold : see -Oid.
Order, a Method of Procedure; a Way; a Drift of Direction; The Regularity of Nature, or of Society; the System of Natural or Artificial Regulation in the Constitution and Administration of Things; see Natural, and Logical Order.
Ordinal, proceeding in an Order or Series, (Latin, Ordo, Ordin-is, an Order), applied to the Series of Numbers, 1st, 2d, 3d, etc., contrasted with the Cardinal Series, 1, 2, 3, etc.
Ordinarism; see -Ism.
Ordinary, Ongoing in the Order of Time; Temporal, Usual; related to the Ordinal Series of Numbers, contrasts with Cardinary, or Transcendental.
Ordinismus; see -Ismus.
Ordinold; see -Oid.
Organic Type, (Actual or Natural), The highest or most perfect specimen of any
species or order of development; the governing form of any species, substantially real, while yet in some measure idealized; observationally central and molelic, (t. 1053, and Commentary.)
Organism; see -Ism.
Organismal; see-Ismal.
Organismic ; see -Ismic.
Organismology; see-Ology.
Organismids; see-Ismes.
Organization, the combining of the different Organs or Parts of any compound object, as the Human or Animal Body, the Army, or the Family, or Society at large, into an Orderly Whole ; all the Parts co-operating to a Common Purpose or End.
Organoid; see -Oid.
Os hyordes, a small bone situated in the throat, or at the root of the tongue.
Ossicula auditus, little bones of the ear.
Ova, (Latin), Eggs.
Ovarian, relating to eggs or the egg sacks, or ovaries, (Lat. ova, Egas.)
Ovation, t. 991.
Ovism; see -Ism.
Ovum, (Latin), Egg.

## P.

Panorama, Universal View; (Gr. Pun, all, and orao, to Look or see.)
Pantarohal, relating to the Pantarchy or Universal Conception and Scientific Type of Government ; of the Pantarchal Order or Kind.
Pantheism; see -Ism.
Pantologic, Universal Logic, embracing Analogic and Catalogic.
Pantology; see Universology, under -Ology.
Pantothet, The Totality of any Organismus, including all its parts and relations, (Gr. Pan, all, and tithemi, to posit or put.)
Parapleaia, Paralysis or Palsy of the lower portion of the Body; of the lower Limbs.
Par excellence, (French), pre-eminently; in the highest degree.
Partialism; see -Ism.
P'artism; see-Ism.
Passions, Fourier's use of the term; all the Motor-Forces of the Soul; any Loves, Affec-
tions, or Desires, good or bad; all the Impulses of the Mind to Action.
Passional Attraction, Doctrine of Fourier, that the Passions, instead of being evil, are the revelation of God's purposes in the sonl, and only require to be understood, and balanced or adjusted, to become the sources of divine harmony in Social Life.
Pelvis, The bony basin which upholds the lower intestines.
Perainonta; see Peras.
Peras, Limit or Boundary.
Perduring, lasting through.
Perennium, literally through (all) years. (Latin, per, through, and annus, a Year) ; a term proposed by Noyes for the larger sense of Millennium.
Periphery, circumferential line.
Perpendicolism; see -Ism.
Per se, in and of, or throngh, oneself, or itself.
Persistent Remainder, a Universological
tcelnicality for a surriving Soul, or Ghost; for the Etherial or Spiritual Part of any Object or Person, or of an Idea even, which survires the death or obliviousness of its grosser outer Covering. See Spirit, Spiritualist, and Rehabilitation.
Perspective, what is seen through, or interiorly, with the lines of vision converging in the distance, and afierwards diverging, as the limiting walls of the view are passed.
Pessinusar ; sce-Isar.
Pessianoid; sce -Oid.
Phalaiges, The bones of the fingers.
Phalavix, a Cohort or Military Body; adopted, however, by Fouricr, as a name for the Compound Family, of about tro thousand souls, to inhabit the single edifice, under the "Harmonic Social Order" of the Future.
Phenomena, (Greek, plural of Phenomenon), Appearances, whatsoever happens or is manife ted by Being.
Phenomenal, relating to Phenomena.
Phenomenology; see-Ology.
Phenomenon; see Phenomena.
Philology; see-Ologr.
Philosopiie Positive, Comte's name for his Fundamental Plilosophy.
Philos phism; see-Ism.
Thilosopioid; see -Oid.
I'honology; see-Ology.
Phisics, 1. The Science of Nature; in alimited sense the General and Mathematical Aspect of Nature, as the Laws of Light, Heat, Electricity, ctc., (Gr. Physis, Nattre, Logos, Drecolrse; ;) more properly MacroPhysics or Ma-macro-Physiology as the Unirer:al Science of External Nature, contrasted with Metaphysics, or Metaphysio'ony; and Jicro-Physice, for the limited seuse of Plyrsics. (Gr. macros. great, and micros, little; ma-macro, vep. great, an augmentation of sense by reduplication.)
Phisiology: see -Olngt.
I'mysis, or l'ursis. (Greek), Nature.
Pieces justificatives, documents adduced in corroboration.
Pis aller. (French), make-shift, last resort, Juck-at-a-pinch.
Prvor, a central standard Ojject, Person, or Illea, around which some system revolves, or to which other things are attached in a subordinate way; the same in respect to what revolves or srrings in various directions, as a hinge is to what merely swings.

Prootal, that which relates to a pirot; see Pivot.
Piroted, supplied with a Pirot, Centre Post, or Standard, around which the parts revolve, and to which they stand centrally related.
Piroted-Eqcated, centred and pivot-like, sustaining a Balanced Vibration on the opposite sides; like the bearing point of the standard of Weighing Scales.
Pivoto-Integerism; sce -Isy.
Planoids, Plane-like curred surfuces, t. 687.
I'lentil, that which fills a space, the opposite of Yacuum.
Pleralism; see-Isa.
Pluralismes; see -lsmes.
Pluralizable, which can be made plural; said of Nouns-Substantives which denote distinctly differentiated objects or thincr, as house, horse, etc.; see Non-Pluralizable.
Pleraloid: sce-Oid.
Plepi-Morphic, having relation to the finelined, infilling, variety of Form, as distinguished from the bolder lines of Form, called Out-line; and hence to Lincs of Color and Qualitative Differentiation.
Pleri-Morphologi ; see-Ology.
Ples, (Latin), More, more than; with the addition of.
Ples quantia, superior quantity; the larger quantity.
Pneuma, Greek for Spirit.
Paetalatismus; see-Isarus.
Paelmato-Anthpopology; see-Ology.
Precmato Cosmical; relating to the SpiritWorld.
Pnelmato Cosmology; sce-Ology.
Prevarato-Unitersal, Universal in respect to the Spiritual Domain.
Paecmatologi; see-Ology.
Polar, relating to the Poles or Extremities of an Axis ; Opposite; Antithetical.
Politique Positive, Cointe's name for his Great Treatise on Social Science.
Polygairy, Marriage of one with many.
Polftielsu; sec-Isu.
Posita-Negatism; see-Ism.
Posita-Negative, relating, collectively, to both the Positive and Negative Aspects or Sides of Things; including Positive and Negative.
Tosited, put or placed.
Positisar; see-Ism.
Positive Science, Knowledge verified by the proper Scientific Mcthods.
Positivism ; see-Isa.

Positivists, The disciples of Comte; see Positivism.
Post-natal, subsequent to birth.
Postulate, a position assumed as sufficiently evident, upou which something else is then to be based ; (Lat. positulo, I denand.)
Potentializlisg, the adding or increase of power.
Practical Philosophi, Philosophy applied to Action or Doing, as, for instance, in Government or Social Organization.
Pre-Clefs, The initial part of the Figured notation in the Fourth Chapter of this work.
Prefix, a Syllable added at the beginning of the root of a word to vary its meaning.
Presentationism; see-Ism.
Prima Capita, (Latin), First Heads.
Primaciord ; see -Oid.
Prias Facie, (Latin), first face, used as we use first blush, in the phrase, a first blush impression.
Prisals, Initial or Primary Principles, Conditions, or States.
Primalismes; see-Ismus.
Prima Philosophia, (Latin), a First or Basis Philosophy.
Prine, First.
Prinisar ; see -Ism.
Primisyes; see-Ismes.
Primordial, First in Order, original; highest in rank, because loweest, or most fundamental in position; (Lat. Primus, First; Ordo, Order..)
Principles, "Truths prior to all facts or makings, themselves unmade,"-Hickok.
Progress, The ongoing and development of Society tending towards Perfection.
Protersion, reaching forth, extension in a lengthwise direction.
Protensive, forthstretching in a single direction.
Proto-Christian, The Old or Earlier Christian Dispensation, now coming to a close, which repagned the Principle of Rationality and rested on Faith as superior to Knowledge; (Gr. Protos, First); see Deu-tero-Christian, and Trito Christian.
Proto-Christlanisis; see-Ism.
Proto-Christianteyts ; see-Isirus.
Proto-Dnexsionality, The common property of Originative Exactification which characterizes the Three Primitive Axes or Dimensions of Space, Length, Breadth, and Thickth. See Bi-Trinacria, Non-In-
clinism. The Intermediate or Inclined Dimensions are characterized by the term Ls-terproto-Dthensionality.
Proto-faci-Dmensionalits, That which is indicated by the Adjusting Lines (Horizontal and Perpendicular, crossing each other at right angles) of the Frontoscopic or Full-Face View of an Object.
Proto-Religiovs, relating to the Proto-Religionismus.
Proto-plasma, The Primitive milky, or plasmal Substance, out of whici Organic Substances and Beings are developed.
Proto-Pragmata, (Greele), First Things or Realities, as distinguished from Principles or First Abstract Ideas.
Proto-Religionisy; see-Isyr.
Proto-Religionisirts; see-Ismes.
Proto-Soclal, relating to the Proto-Societismus.
Proto-Socletisy; see-Ism.
Proto-Societisurts; see-Isjits.
Propension, The Direction and Dinension which tends forward and downward.
Propricir, what is fundamentaliy one's own, as differing from endorments, or what is conferred.
Prospective, Front View, Frontoscopic.
Psecdo-, or Pseud-, (prononnced seud-), false, counterfeit, imperfect; (Gr. pseucios, false.)
Psyche, (Greek), The Soul.
Psychological, relativg to Psychology and the doctrine of the Soul or Mind.
Pstchology; see -Ology.
Pcrctate, relating to Point or Points.
Puxctation, the making of point or points; a congeries or arrangement of points.
Punctisar ; see -Ism.
Pcyctismal, relating to the Punctismus.
Pexctismes; see-Ismes.
Puncto-Easic, that which stands upon a point as a basis or foundation.
Practuar Tite, (Latin, Point of Life), The theoretical Point at the base of the brain where the nerres decussate in passing from the Lobes to the Spinal Cord, and in which the Life-Forces centre.
Purgatory, The Purcative or Depurative Region in the Spirit-World betreen the Hearens above and the Hells beneath; called by Swedenborg "The World of Spirits."
Pframidism; see-Tsy.
Prramidoid; see -Oid.

## Q.

Quadrature, Squaring.
Qualitative, relating to Quality, (Substance, Tining, Observation.)
Quastification, reduction to a given Quantity.
Quantitative, relating to Quantity, (Number, Relations, Form, Laws.)

Quartism; see-Ism.
Quasi-, (Latin), as if; as it were.
Quintism; sec-Ism.
Quod erat demonstrandum, (Latin), some thing which was to be demonstrated.

## R.

Radical, what goes to the root or bottom of a subject; used in a good sense, meaning thorough, and, in a bad sense, meaning that which is upturning and destructive; (Lat. Radic, a Roor.)
Radioals, persons who are Radical in their dnctrines or tendencies.
Radicalism; see-Ism.
Radioid; sce -Oid.
Radius, (Latin), plural radii, literally a spoke, a line going forth from the centre, t. 580.
Radius vector, a Radius extending from a Centre to a moring Point in the related Periphery.
Ramfying, branching. (Lat. ramus, a Brance.)
Ratio, Proportion, related etymologically to Reason.
Rationalism; see-Ism.
Rationalistic, temling or belonging to Rationalism or the methods of the Reason.
Rational-Spiritual, analogous with the Head and Chest.
Reactionist, backward-tending; recoiling; opposing Progress.
Renlism; see -Ism.
Realists, The Sect in Plilosophy who assigned a Real Value to General Terms, making them to be something more than mere empty Words or Names as held by the Nominalists.
Reality, whatenever is, $=$ Something.
Real Presentationism; see -İsu.
Rectiliniisa; see-Ism.
Rectilimioid; sec -Oid.
Rectism; see-Ism.
Reotoid; sec-Oid.
Reourses, a running back, (Lat. Re, back, and curro, I rua.)
Reduotiones ad azsurdissimum, (Latin), Re-
ductions to the most absurd point conceivable.
Reflect, (Subs.), The light thrown by any object which reflects; the instance or case of reflection.
Reflective, lending back, applied to mind and to material things; (Lat. re, Racr, flecto, то bend.)
Refletion, or Reflection, The image thrown back by the external light, or by the light of mind in the act of thinking.
Reflexionoid; see -Oid.
Rearime, (French), Order or System of Goverument, of the individual conduct or life, or of other things.
Regnology; see-Olocy.
Regreesive, Back-going.
Reguloidness, The state of being nearly regular.
Piemabilitation, a renewed clothing upon, as of a resurrected Soul with a new Body. An Idea forgotten in the mind is dead, but having still, in its death or state of oblivion, a Persistent Remainder, whence it may be re-called to life in the mind, or remembered, which is being rehabilitated, or again clothed upon with the grosser drapery of the external consciousness. This fact of remembering is then a real Resurrection of a Departed Spirit. The Idea so lost and recovered is the Scientific Analogue of the Soul that dies, and yet lives in a latent state, and which, at least in some cases, is destined ultimately to be resuscitated ( t . 404). The technicality for the resumption of material bodies by departed spirits, as at "The Resimrection," is, therefore, The Rehalilitation of Persistent Remainders. (c. 3, t. 43.1 ) ; see Spirit, Spiritnalists.

[^3]lations, as contrasted with the Entical Domain.
Iielations, The Intervening Ideal Adjustment between Things or Entities; more specialized, however, than Space, The General Medium, which, while it surrounds, also intervenes, as Interstices or the Air converted into Breath; lence Relations are symbolized by Lines of Connection; extended and generalized they are equivalent to Laws ; see Entities.
Ielative, The, The World of Related Phenomena or Appearances; the Shimmer of Differences upon a Ground of Unity, which Ground is The Absolute,-itself, however, no other tan The Counter Aspect of The Relative, in the Higher, or Composite Absolute, or Actual Existence. (t. 267); sce Absolute.
Reldtivity, of knowledge, the doctrine that nothing is known absolutely or in a state of independence from all other knowledge; but only by virtue of its relations to other things also known; that things are rela-
tively true, but not, so far as we know, absolutely so.
Relatoid; see -Oid.
Religio-Artistic, allied with the religious side of Art.
Peligio-Philosophy, The Philosophic Aspect of Religion.
Reyamder; see Persistent Remainder.
Repetitive, iterating, repeating; that which repeats, t. 31, p. 19.
Repetitory; see Repetitive.
Repllsionology; see-Ology.
Res gesta, (Latin), Things done.
Residea, (Latin), Things which remain.
Resultant, a product of things combined.
Resure, (French), a condensed re-statement of a subject. (Dote.-In adopting words from the French I have usually dispensed with the accent marks, when they could be spared without seriously impairing the Pronumeiation. The usage in this respect is not settled. The first accent (') in this word is not essential, the second is so.)
Retrogressive, tending to go back.
Rotundisay; sec-ism.

## S.

Sacrum, The thick heary bone or column of bones which forms the pasterior part of the pelvis, and is a continuation, downward, of the vertebral column.
Sarcognomy, The Science of Correlative Or-ganic Regions in the Body or Trunk to the Phrenologic Organs of the Head-Buchanan. (Gr. Surx, The Flesh, Logos, Discourse.)
Scala, (Latin), a flight of steps or stairs; a scale.
Scapula, The shoulder blade.
Schema, an Outlay or Plan. (Gr. Schēma.)
Schemata, Plural of Schema.
Schemative, relating to Schema, Outlay, or Plan.
Science, The Antithet of Nature, as being the stage of Intellectual Rectification, after that of Primitive Crudity, (Nature), and prior to that of Tasteful Modification, (Art.)
Scientism; see-Ism.
Scientisimes; see -Ismus.
Scientized, rendered or made Scientific.
Scientoid; see -Oid.

Sciento-Abstract, (Subs.), The Pure Ideal Abstract; (Adj.), Abstract in the Scientific Seuse : contrasts with the Naturo-Abstract. The Boncs separated from the Flesh are an Analogue of The Sciento-Abstract; The Flesh separated from the Bones are an Analogue of the Naturo-Abstract.
Sciento-Abstractisal ; see-Ism.
Scrento-Elementart, elementary in respect to axiomatic Truths.
Sulento-Negative, that which is Negative from the Duismal or Scientismal point of view, t. 811.
Sciento-Philosophic, pertaining to ScientoPhilosophy.
Sciento-Philosopey, 1. Philosophy passing over into Science, and furnishing the Laws and Principles of the Special Sciences. 2. The new, Scientized, development of Philosophy; Metaphysical and Generalogical Methods applied in the Sciences, or, inversely, Scientific Methods in Philosophy. Strictly speaking, Sciento-Metaphysic should be applied to the regenerated Metaphysics.
and Sciento-Plilosophy to the New, and Higher, or Transcendental development of Positivism (Echosophy), resulting from Unism, Duism, and Trinissr, the Primordial Laws of Universology; but, these run greatly together, and, for simplicity, the term Sciento-Philosophy may be used indifferently for either, as happens in the Text. In fine, the Lower, Unismal, or Naturismal department of Sciento-Philosophy, in this compound Sense (prior to the definitive discovery of Universal Principles) is embraced by the works of such thinkers as Mill, Spencer, and Bain, Metaphysical, in a degree, and exact as may be without a Universal Canon of Criticism, but modulating chiefly in Natural Philosophy. The rigorous Universological a priori Method and Department, constitutes merely the Duismal or Scientismal Subdivision of the same, (Sciento-Philosophy.) The Trinismal stage remains to be developed.

Sciento-Philosophy is the Fountain Head of the Sciences (c. 1, t. 12). Firnand Papillion (Introduction to the Study of Chemical Philosophy), thus defines Philosoply in this new and more exact seuse. "A hierarchical and positive systematization of the particular Sciences, lased on the knowledge of their evolution, which shows the connection of the facts with the culminating ideas of knowledge, that which regulates the mutual relations of the diverse orders of knowledges; it lies in the determination of the knot, of the tie, of the point of confluence, of the directrix of all the branches of the thought; it demands the submission of every order of knowledges, whether Cosmological or Sociological, to the control of the same homogeneous method, sometimes Inductive and sometimes Deductive, but always Objective." There is a radical difference between this "Positivist" Conception of Philosophy and Metaphysical Philosoply at large. The Sciento-Philosophy of Universology is still, however, in part only, covered by this Definition, inasmuch as by Ultranalysis it first determines with precision what are the Culminating Ideas of Knmeledge, and establishes them as Unism, Duism, and Trinism. It then carries its method, thence, not merely to the Classification of the Sciences, as among themselves, but into all the Details withle each Sci-
exce, down to the minutest, thereby reconstituting all the Sciences in Harmony eaoh with the other, from this new Subtranscendental Philosopitic Point of View, as tue Fountain of Controlling or Fresiding Knowledges; and not alone Objectively, but Subjeotively as well. See Index, word Sciento-Philosophy.
Sciento-Positive, that which is Positive from the Duismal or Scientismal point of view, (t. 811.)

Sciento-Religious, relating to Religion rationalized, or founded on Science and the discovery of positive Laws for the regulation of the Conduct.
Secondisar ; see-Isy.
Sections, a better term than Fractions for the aliquot divisions of the Unit, (t. 841.)
Seotor, the part of a circle included between two radii and the included arc.
Sectoral, relating to a sector of a circle.
Sectorizing, the dividing of the circle into sectors.
Secundo-; see Deut(er)o-.
SEGMENT, a part cut off from a (circle or other) figure by a line or plane; particularly so much of a circle as is cut off by a chord.
Segmental, referring to a segment.
Segmentisa; see-Ism.
Senatoid ; sce -Oid.
Senectoid; sce -Oid.
Sensationalism; see-Ism.
Sensationoid; see -Oid.
Sequences; see Co-sequences.
Sequentiality, the property of following on in the train of points, things or events.
Serial, relating to a Scries.
Serial Law, The Graud Law of Universal Distributiou and Succession ; of Co-existences and Co-sequences, in the Universe.
Seriated, arranged in series, or succession; or in accordance with Serial Law.
Serintion, the constitution of a Series; the state of being in Seriea, or succession.
Sesquism; see-Ism.
Sessamoins, small bones situated in the substance of tendons near certain joints.
Smplisar; see -Isar.
Simplistic, that which relates to, or takes into account, only one, or some few, or most, even, of the elements or factors which enter into any Composity or Compound Structure, omitting or neglecting the other
perhaps equally important elements or factors.
Singulisar; see -Isar.
Singulismis ; see -Ismes.
Sixglioid ; see -Oid.
Sitration, distanciated and related position, t. $9: 3$.

Srra, one of the persons of the Hindoo Trinity.
Socras, that which relates to Society, or to the community of men in Societs.
Soclalisy; see-Isy.
Soclology; see -Ology.
Solidarity, the Conditions of Bing which relate to Space and Co-existences, not riewed as continuous or prolonged in Time; the intercombined relations of Humanitr, making the Expansive Unity of the race as distributed ofer the whole rorld. See Continuity.
Solidisy : see -Isy.
Soyatology; see-Ology.
Sotereigaty of the Individeal, Doctrine of The Inherent Right of All Men to be a Law unto Themselres; requires the Limitation: without Encroackment, or in so far as they abstain from encroaching on others.
Spacial, relating to Space.
Spicre, relating to Space, hence Ideal, as Tempic and Temporal relate to Time, and to Materialities.
Spacro-, relating to Space.
Spacioid: see -Oid.
Speclalists, men devoted to a single object or pursuit, especially in the Sciences, to a Single or eren to Several Domains of Scievce, but narrorred, in their attention, to these; not imbtied with the General Philosophy of the Sciences.
Epectalogy; see -Ologe.
Speclaloid ; see -Oid.
Spectlology; see-Ologf.
Spheres, globes: Concentric Planoids; Aromal or Spiritual Circumambiencies, enreloping individuals or emanating from them, somewhat as the atmosphere is related to the earth.
Spralisif ; see-Ism.
Spirit, 1. Vapory, breath-like, gaseous or etherial, Consistencrof matter; aFluid, even, which has diffusire and stimulating emanations or effects ; II. Mind or Mental Substance in a similar attenuated diffusive and radiating, or permeating, condition; III. An Indiridualized Mentality, residing in,
or separated from, the material Bodr, as the ordinary vehicle and instrument of mind. It is then analogons with the dymamic-centre-together-with-the-etherial-emanations-and-radiutions of a planet, differentiated from the solid bulk or body of the planet as such; which Spirit of the planet may then be conceived of as endowed with a ghostly survirorship, or as retaining a Persistent Remainder, after the dissolution of the grosser planetary fabric. In the ligher organismus, called man, this Spirituat-Core-and-its-Halo is conceived of, from the Spiritualistic point of view, as the more important part, as, in fine, the real man himself, of which all else are merely the accessories. See Persistent Remainder.
Spirimisy; see-Isy.
Spiritists, the investigators of spiritial phenomena in a material and external sense.
Spiritcal, relating to Spirit in some one of the several senses of that word; see Spirit. Aerial, attenuated, aeroid (like air or breath) ; relating to diffusive and atienuated Matter-, or Mind-Substance, and to morements or activities of such; (Lat. spiro, I breathe; see Pneuma.)
Spirit-Matter, a more refined Ether.
Spiritoid; see -Ord.
Spirito-ldeal, semi-spiritual, semi-ideal.
Spipittalism; see-Ism.
Setarism; see -l sm.
Stabiliolngr; see -Ology.
Stard-ponit, or Standing-point, the mental position from which one views a subject.
Stata-motism; see -Ism.
Sratic, that which refers to Station or Rest; see Motic.
Stamion, Rest, quietnde, or quiescence, contrasts with Motion.
Statizar: see -Ism.
Statisurs; see -Ismes.
Etato-Concretologi: see -Ologi.
Stato-Conditionoid; see -Oid.
Statoid; see -Oid.
Staroidisw, the state of being analogons with station.
Statologi; see-Ologr.
State qeo, (Latin), the state in which (things are) ; the existing state.
Strancir, the breast-bone or column of bones to which the long ribs are attached in front.

Stiallus, (Latili, pl. Stiveli), Pricks or Points, so applied as to excite activity.
Srpectere, Construction, Building, Shape, Make.
Strectirology; see-Ology.
Subdominaice, Minor Governing Influence.
Subdominatt, governing in a minor sense or deree.
Scbiect, the Observer or Thinker in respect to his ornu interiority or self hood, which is affected by, and so subjected to impression from the outer world; see Object.
Scbjective, that which is interior, or within the miud of the obscrver; that which relates to Humanity as contrasted with that Which relates to the External Universe at large,-Comte ; see Objective.
Stbjectivisiaus; see-Isyus.
Sub-Natcree, the Domain of Metaphysics.
Sub-犬̈aterisjecs; sce-Isycs.
Stb-mormal, normal in a secondary sense; see Normal, t. 860.
Subsidence, sinking.
Stbstan-cl-Isy; sce-Ism.
substan-ci-ismes; see -Ismes.
Substan-ci-oid; see-Oid.
Substancive, relating to Substance (NaturoAbstract), as-abstracted-from-its-embodi-ment-iu-Form, (which last, when abstracted, is Sciento-Abstract.) Substantial relates to Substance-as-embodied-in-Form, creating the Real Thing; Substantive relates to The Thing so constituted.
Sub thivtive, adj., relating to any Substantial Thing or Object.
Eubstantivity, Reality, embodied in Form.
Substantismus; see -Ismes.
Substantivoid ; sec-Oid.
Sübstaitoid ; see -Oid.
Sub-stratum, an under-stratum, or lajer.
Subscmed, taken up under; (Lat. sub, cadeer, and sumo, I take.)
Sub-Transcendental, Transccadental, or palsing beyond (The Ordinary), in the Radical Direction, or Direction downward.
Subtrinscendentalism; sec-Ism.
Successional, relating to Succession.
Seccessivity, Succession, Co-sequentiation.

Surarition, the constitution of a sum.
Supercirccmperentiality, the property of being over and around, as that portion of free Space which we sec above and around us.
Supernalisay; sce-Isy.
Super-natation, swimming up to the surface; (Latin, Super, Adote; Juto, ro Swing.)
Supervology ; sec-Ology.
Superscrficial, relating to Supersurfaces, and Etheria; see Universology under the rowel $a$.
Strfacial; see Surficial.
Surfacism; seo-Ism.
Surficial, (or surfacial), relating technically to the Geometrical Surface. Superficial, from the Latin Superficies, Scrface, has acquired in preponderance a more general and ideal meaning.
Stllogisar; sce-Ism.
Syllogistio, relating to a Syllogism.
Syarbol, Sign, Type, Emblein.
Syarbolisyr; sec-1sm.
Stabblology; see-Ology.
Stametricoid; sec -Oid.
Synchronous, contemporancous, (Gr. Syn, Together; Chronos, Time.)
Syncrasis, (Greek), a breaking domn and crushing together.
Synstasis, a standing together, the state prior to Analysis, as Synthesis a putting together, is the state subsequent to Analysis.
Synstatio, standing-together; not as yet analyzed or differentiated, relating to a primitive, undifferentiated state. (Gr.syn, with; stasis, a standing.)
Synthesis, a unition or putting tocrether of Elements or Parts. Integralisni; Trinism; used by Comte for a Constituted or Unified stage or order of Society. (Gr. syn, with; tithemi, то PIT.)
Syntietic(al), Integrative, conjoining, uniting. See Analysis.
Systematology; sce-Ology
Systole, the Contracting Stage of the Cirenlation ; Contraction of the Heart and Arteries. (Gr. syn, wITI ; siéllo, тa send.) Seo Diastole.

Tableau, (French), a Picture.
Tactes ercdites, (literally, the learned touch). The practical or cultivated sense, especially of feeling.
Ta Polla, (Greek), The Many, contrasted with To Hen, The One.
Technisacs; see -Isarcs.
Telfology; see -Ology.
Tellerology; see-Ology.
Tearro, (Greek), to cut or divide, whence comes Time, as a derivative.
Temperamentology; see-Ology.
Tearpio, relating to Time.
Tempisir; see-Isa.
Temporal, relating to Time.
Tentroid ; see -Otd.
Temporotd ; see -Oid.
Tendential, that which tends, strains or reaches out towards; t. 31, p. 19.
Teras, an End, a Period, an Expression, (t. 580.)

Terminas, that which relates to Ends or the End. (Lat. Terminus, an Exd.)
Terarisation, that part of a word, in Etymology, which follows the root and ends the mord, with or without a connecting rowel between it and the root.
Termines, (Latin, pl. termini), End, Point of Arrival.
Tertisx: see -Ts.r.
Tertisarcs; see -Ismys.
Text, 1. The main Web of Discourse, upon which a Commentary or Annotation is made; 2. A particular single Paragraph of the text in the larger sense.
Terocracy, that Style of Human Government in which God is directly recognized as the Governor; or a State so governed. (Gr. Theos, God ; Kratos, Power.)
Theologica-Metaphysical, relating to the joint Domain of Theology and Metaphysics.
Theology; see-Ology.
Theriotics, the Science which treats of the Laws of Heat.
Tresis, the Subject-Matter of some discussion. (Gr. tithemi, то per.)
Thet, That which is first laid down, as a basis, with which some Counterpart is then to be contrasted. (Gr. tithemi, тo PUT.)
Thickth, The Third Dimension, irrespective of the plus or minns quantum of Extension;
an idea quite distinct from Thickness as the plus-quantam of extension, in this dimension, (t. 821.)
Thinkivg, Thing-ing, the ideal or mental delineation and constitution of things.
Thoiss, (Latin), the roof of a temple; the superior columnar part of a dome.
Thorax, the Chest, containing the Heart and Lungs.
Triswa; (Tee-kee-wah), the Now Scientific Universal Language, derived from Universology; the same as Alwato, which see. $T i$ means Unition, and Ki Division. These two ideas are the most abstract expressions of Unism and Duism, the Fundamental Principles of Universal Being. $W a$ is the root-word which means Speech or Language. Ti-ki-wa means, therefore, the Language derived from Abstract Universal Principles. (The Accent in this and other Almaso words, is rariable, ad libitum, to bring out more distiuctively the Different Elements of Meaning. It is Emphasis within the word. If requisite, the accentmark is written.) Tikizoa is thus a technical or philosoplical natre for the new language, but Alva, or Alwato, The AllSpeech, or All-Speech-Thing, is the better popular name, as it is more easily explained, and is, perhaps, more euphonious.
Alwato or Tikiwa is based on the ciscotery that every Articulate Sound of the Human Voice (more vaguely this is true of all sounds) is inherently charged, by Nature herself, with a Definite Meaning; that these Meanings, so inhering in the Universal Alphabet, (the Elementary Sounds, Vowels and Consonants, of Existing Languages, sifted and unified, alphabetically), are The Most General Thoughts of the Mind, and, at the same time, The Most General Elements of External Creation, and so of All Being whatsocver ; (the Ideological Alphabet and the Ontological Alphabet, respectively); and that, consequently, Words buill by combining the Letters representing the Sounds of the Universal (Language-) Alphabet are the natural and proper Namings of Thoughts and Objects formed by the corresponding Combinations of the General Elements of Thought and the Gen-
eral Eiements of Being into the Particulas: Thoughts and Objects so named by these Natural Words. (See t. 203, and Introduction, p. xviii.)
The elaborate exposition of the outworking of this discovery would fill many volumes ; will occupy in great prominence the labors of the University for many years, and will be, in a seuse, the central occupation of all thinkers in all coming time, as the labor is infinite and inexhanstible, or only to be measured (in its details) by the extremest possible development of the human mind. No attempt will be made, in this abridged enceclopedic definition, to do more than to render intelligible the Principle of Word-building here indicated, and to direct attention somewhat particularly to the Parallelism of Development in different Spheres.

A sufficient preliminary account of the Vowels, and their Natural Meanings (with some allusion to the Consonants) is found under Universology (in this Vocabulary), which see. The Ambigu's ( $\mathrm{h}, \mathrm{y}, \mathrm{w}$, ) are defined under Theology. It remains, at this point, to exhibit, a little more at large, the nature of the Consonants. I refer for the fuller statement of all this subject, and for the proofs, to "The Primary Synopsis of Uriversology," "The Alphabet of the Universe," "The Unirersal Alphabet," and other subsequent works.
The Vowels collectively denote (Plasmal) Reality. The Consonants denote LimiTation. The Thin, Light, or Abstractoid Consonants, $\mathrm{t}, \mathrm{k}, \mathrm{p}$, (th, tsh), sh, s, f, denote Abstract Limitation-Mathematical. The corresponding Thick, Heavy, or Concretoid Consonants, $\mathbf{d}, \mathbf{g}, \mathbf{b} ;(\mathbf{d h}, \mathbf{j}), \mathbf{z h}$, $\mathbf{z}, \mathbf{r}$, denote Concrete Limitation, which is Bodies or Concrete Things (Mineral, Fegetable, or Animal.) Of the remaining Consonants, (Liquids) $\mathbf{m}, \mathbf{n}, \mathbf{n g}$ denote Extensional Inclusion, The Plus, Minus, and Equation (or mean Term) of Mathematical Generalization, and so the Logic of Being; and $\mathbf{1}, \mathbf{r}$, denote Rates of Velocity in Motion, the Plus and Minus of Movement.

In detail $t$ is Position; tsh Extension as Indeterminate Stretch, $k$ Figure or Cut, th Pivot, and $p$ Hinge (Cardination, Cardinal Limitation); sh Dispersion, \& Collection, and $f$ Operation, as the hinging (or winnowing) relationship of Diffusion and Col-

Iection ; d is Resisting Soliditr, $\mathbf{j}$ Mixture, g Force, dh Head with Hulo, as the Sun, b Body; zh Concrete Dispersion as of the Tree, Vegetism, $\mathbf{z}$ Coucrete Re-combinstion, as The Animal, of a Diversity of Organs, v Life, Physiological Vitality. m means Great, Much, Out, I'lus; n Smail, Little, In, Hinus; hy means Indifference, Neutrality, Menn Term, Equution. L means Longness, Continnity, Unbrokenness, Wholexfess, Slowness, Lentitude, Ifinus-MIovement; $\mathbf{r}$ means Shortness, Solution of Continuity, Brokenness, Pariness, Quickness or Violence of Movement, Velocity, Plus-Morement.
In accordance with the model and example of Word-building, here more properly suggested than exhibited, millions of words, which will be virtually self-defiuing, may and will be formed, so soon as the machinery of their construction is acquired by the world. The process of constructing them, or the more sight or hearing of thom when constructed, will educate the thought, and force the mind into an infinite number of new and hitherto unthought-of discriminations, both in the direction of the broadest generalizations and of the most subtle and exact minutiæ of particularity. Wordbuilding, by this method, offers, as it were, a special gymnastic for every distinct fibre of the mind, somerwhat like an apparatus of the Movement-Cure for the body, which should be so exquisitely contrived that it should be precisely fitted to bring every fibrilla of every muscle into distinct, raried, and healthy action, in exact accordauce with its most intimate nature and adaptations.

This wonderful inherent potency of speech itself, not merely to serve the purposes of thought, when thought lias been independertly excited, but to be the chief means of exciting it, infinitely beyond any past conception of the possibilities of the subject, is the special revelation of the New Universal Science as it applies within the department of Language. And, what it accomplishes in this department is an exact image, a precise modelic illustration of what it does or is competent to do, for evcry sphere of Thought and Being. In Human Societr, for cxauple, it will serupulously thread every aspect of possible luman affections and relations, as also of individual character,
or again, in a word, it will radically exhaust whatsoever Domain.

Thus, Universology not only classifies and explains the Actual Creation, but it previses, potentially, or to the extent of our mental ability to apply its Principles, all Creation which is possible in the Nature of Trings. Giren the Principles of this Science together with the Conditions at any point in tine, which may be assumed as The Beginning, and the Actual World in all its Details might have been Wrought out as the Logical Necessity, and with Mathematical certainty, by a mind competent to the tas's of the legitimate application of the Principles to the Conditions; and this without essentially contravening the Freedom of the Will of any Individual inrolved in the process, WHO SHOULD BE so DEVELoped as to be in Hapmony with Unirersal Nature, or otherwise apprehended and stated, with The TWill of God.

We are thus conducted to the old and rexed question of Fixed Fate and Freewill, which can hardly receive its ultimate solution in a single paragraph, un? ess the folloring statement can be accepted as such : All Rational Beings are, as to their Inmost, perfectly identified with all other Rational Beings, or hare, in other words, their root in God. This is The Unismal Aspect of their Being. Their Diversities or Contrasted Indiridualities belong to the Divergent Development of Universal Being outward and away from this Centre, constituting the Individual Proprium of each, (except in respect to the Central or Pirotal Monad who fills the position Which we instinctually assign to God.) This Divergency into Individual Wills is The Detsmal Aspect of the Rational Eniverse.

Hence, the apparent or external Individual Will, when being constrained by the operation of Unirersal Lat, is only constrained in respect to the Individual's outer or (scemingly) Natural Will, while at the same instant he is being ruled in accordance with his omn Inmost Consent and (more Interiorly Natural) Volition, which his Onter Consciousness may not for the time be deep enough to penetrate and recognize. Conversion to God, or the Reconciliation of God and Man, is, therefore, simply the Interiorization, and the Univer-
sal Expansion thence of the Individual Human Soul, met and corresponded to bs the Exteriorization, in turn, of The Dirine, and the permanent establishment of its centred authority (" The Influx of the Holy Ghost," "The Love of God shed abroad in the Heart,") in his indiridual Proprium. This is the Regeneration of the Selfhood. It is, in other words, the Individual's discorery and acceptance of his own higher Unity with the Central, and so with the Universal, Goodness and Truth of all Being. The Freedom of his Will is thus rindicated in its reconciliation with the Dirine Will, as being, in rery deed, more truly his orn Will.

This is then the Tratsmat or Harmonic Stage (the Perfected Aspect) of Rational Development. At this point, the Theistic, the Pantheistic, and the Atheistic Conceptions come into perfect accord with each other, and will only remain as "The Personal Equation" of the different observers in the same field, the leanings or preferences of different organizations for diverse methods of the statement of phenomena, in respect to the essence of which all the parties to the old controversy will come substantially to agree. The Morality deduced, or the Religion of the Life, Till be identical with all. Such is the Grand Reconcillimon which Science tenders to the conflicting Religious Sentiments of Mankind, in the creed of The New Catholic Church; The Grand Spiritual-Rational Univariety of Being. See Psychology, Theology, Unirersolog!.
Tissues, the organized substances of which the aninal or human body and regetables are composed.
To Hen, (Greek), The All.
Tonc, the Kernote from which a tune takes its departure in music, and by which the time is regulated.
To Pleres, (Greek), The Plenum, that which fills a Space.
Torso, Trunk of the Body.
Toct ensemble, (French), The totality or Conspectus.
Tram d Union, (French), a lengthwise connecting line.
Tratsoend, (Verb), to rise above; to assume the position from which to look down upon a subject from a higher point of view; as in the political doctrine of "The higher

Law,"-Sewar l. (Lrt. trans, orer or Bero:d, and :cindo, GO, or TO $\triangle$ SCEND.)
Tran=cendental; see Transcend, and Transcendeutalisun.
Traf:oendentalisy; sec-Ism.
Transcendental Science, Science logically derivel irom Tecessary Principles.
Trinsition, a passing over from one state to another. (Lat. trans, AOROSs, OVER, and ire, то Go.)
Truisitional; see Transition.
Treisir ; see -Ism.
Tre-trisy; see Tri-unism, under -Ism.
Tri-dimensionality, the state of having three dimensions, called "Length, Breadth, and Thickness;" extension in all the Three Dimensions, Length, Breadth, and Thickth.
Triarade, developed in three Stcpis or Degrees. (Lat. Tres, Three; Gradus, Step.)
Trigrays, Triangular Figures.
Trinism; see -Isy.
Trinisma, Trinism, specifically in the elaborate or concrete sense, as Real Being ; discriminated in kind from the Abstract and Elementary Principles, Unisy and Duisar, (c. 1, t. 203.)

Trinismal; sce-Ismal.
Trisisule; sec-Ismic.
Trinismus; see -Ismus.
Trinoid; see -Oid.
Tpi-sected, eut in three, meaning, usually, cut or divided by three planes at right angles.
Tri-section, the operation of trisecting, or the state of being trisected.
Trito-Christlan, relating to the Third and Final Christian Dispensation, or more largely, to the New Catholic or Ultimate Religions Career, now about to commence in the World, to result from the Reconciliation and intelligible and perfect Harmony of Rationality and Faitls; of scientific Certainty or Knowledge withe Intuition, Inspiration, and Revelation; or again, in other words, of the Revelation theough Scienee of this day, with the Revelation through the Influe of the Divine Spirit of the Past; this Reconciliation and Harmony to be effected throngh the subtle Analysis and Analogies of Universology. Sco ProtoChristian, and Deutero-Christian. (Gr. Tritos, Third.)
Trito-Christianism; sce -Jsm.
Teito Curistianisarcs; see -ismcs.

Tritogenea, (- Field), the doctrine of the origin and distribution of things in trigrade scale. (Gr. tres, (tritos), tepmes, (THIRD) ; genos, kind, or solt.)
Trito-Relialonisar ; see-Ism.
Trito-Religionismes; sce-Ismes.
'Trito Nocial; relating to the Trito-Societisnus, or Tinird Grand Stage in the Development of Human Society.
Trito-Societisir ; see-Jsm.
Trito-Societismús; see -Ismes.
Tri-Cnism; see -lsm.
Type, a Model, Pattern, or pivotal ard sample Entity of any kind. Sea Organic Type. Typicas, relating to, or derived from a Type. Typical Play; see Ideal Typical Plan.
Type-Forms, (Ideal, Transcendental), the Pattern in pure ideal conception to which any Object, Organismus or Scheme of Being whatsocver, tends to conform ; or from which it may be conceived of, ideally, as having taken its departure ; constantly intimaied, but never actually imitatel, by the Actual or Natural Forms involred in the Organismus, howerer typical, in the scuse of reigning or predominant, these Acturl or Natural forms may be. The Transcendental or Highest and truc Scientic Ideal Type-Form embodies the -Isy rather than the -Ity; (see-Isar.) As recently expounded by Taine, the aim of artistic production is "to represent some quality of objects in a more impressire manner than is done by the Objeets themselves;" that is to say, to abstract an Attribute, or Quality, or Tendency, or Relation, even, and to re-emboly it in an Ideal Object, distinct from any real olject, but more replete with the Spirit of the given Aspect of Being. This is preciscly what, in Science, furnishes Ideal Type-Forms; so that the Highest Science and the Highest Art concur. As Professor Richard Owen recently obscrves, with, I think, no more than a due amomet of critical severity: It implies a certain degree of obtuseness to confound this idea with Tyne-Form in the lower or less Tramsceudental seuse, as merely the sample-instance among the Real Objects of a given Species or Class ; ( t . 10.3, and Commentary ; t. 1053, and Commentary) ; see Ideal Typical Plan. Type-Forms are of three kinds, Initial, Melial or Middle, and Final ; (t. 1051, 1051.)

## U.

Ultivates, Finalities, Outer Ends, region of Results.
Uitinatom; see -Oid.
Ietranalysis, the deeper and more radical analysis, like sub-soiling, in agriculture.
Ultra-avalytical, relating to Ultranalysis.
Clira-Indective, beyond the first and immediate result of Induction.
Ultra-Natcre; see Sub-Nature.
Uxi-dnexsionality, extension in a single dimension, as Length or Breadth.
Uni-directional, extending in a single direction. (Lat. Unus, One, and Directio, Direction.)
Unt-laterat, One-sided. (Lat. Unus, One; Latus, Sme. )'
Unt-morphic, having relation to Outline, and so to Form and Quantitative Discriminations, as contrasted with Plurimorphic Limitation. Unnrorphic Configuration, the Primary and General Outline of Objects, as differing from Plurimorphic Configuration, the Minute Configuration within the panels or interspaces of the Outline. For example, the Unimorphic Configuration of the Presentation made by an Edifice consists of the Base-Line, the Upright Lines at the Angles or Edges, the Slant of the Roof, the Outline of the Grand Openings, the Windows and Doors, etc., the Interspaces being regarded as uniform, or destitute of Morphic Variety; while the Plurimorphic Configuration relates to the Seams between the Blocks or Bricks, between the Clapboards, Shingles, etc., the Lines of Color, of the Fiber, even, of the Materials, etc., which are perceived on closer inspection to rariegate the interspaces of the Outline, themselves. So, in respect to the Human Body, the Unimorphic Configuration consists of the general Contour, of the grand Divisional Lines as the Median Line, (Linea Alba), and the Line of the Girdle, of the Breaks at the Joints, etc. ; and the Plurimorphic Configuration consists, on the contrary, of the wrinkles on the Surface, the Light-andShade Lines, the Lines of Difference between the Tissues, etc. The Difference is like that between Gcneral Anatomy and Minute Anatomy or Histology. Strictly
and scientifically defined, Unimorphic Configuration holds the same relation to Plurimorphic Configuration within the Abstractismus, or the total Morphismus of Being, (which they divide between them), as that which the Inorganic World (The Inorganismus) holds to the Organic World (The Organismus) within the Concretismus, or total Corporismus of Being, (which they in turn divide between them.) See Plurimorphology, under -Ology, and the relation of Pauski to Fauski, and of Bauski to Vauski, under Psychology (under -Oiogy), and Tikima.
Uxtmorphology; see Unt-morphic; -Ology.
Unipunctism; see -Ism.
Untsm; see -Ism.
Untsmal ; see -Ismal.
Unisme ; see-Ismo.
Unitary, what relates to Unity.
Eattary Lati ; see Law.
Untariant, that which combines an Aspect of Unity on the one hand with an Aspect of Variety on the other.
Untrarietr, the Combination or Combined Result of Unity and Variety; the Cardinism or hinge-wise relationship of Unity and Variety, or of Sameness and Difference, in The Complex Totality of Being, which is the type of existence in every sphere. Infinite Variety in Unity (or Unity in Variety), of which the least, lowest, most simple, elementary and all-inclusive instance is tho Cardination of Unssm and Dursy in the Composite Trentsar of all reality; see these terms under-Isw, and t. 203-3. See also Cardinism, Pivoto-Integralism, under -Iss, and Universology, (letter p), under -Ology. Words of this type of structure and meaning (like Univariety) are what is meant by the lacking Third Terms of Existing Languages and habits of thought, (c. 3, t. 226), both our languages and onr thoughts having been bitherto simplistic. The words Trinity and Triunity are the best instances of words of this class heretofore existing. Alwato will abound in such words, hinged or complex in Meaning and Structure. Simplists, persons whose order of mind or development is Simplistic, (monotypic), are closely related to Simpletors, the good old Anglo-Saxon term spon-
tancously evolved to denote, upon the lower or common plane, the absence of that complexity or many-sideness (polytypism) of mentality which will characterize pre-eminently the more H:ghly Differentiated Humanity of the Future. The world will take a new degree in its intellectual expansion, elevation and power, from the time that its habitual thougths demand the existence of terms of the Unvariant order. Plionetically they will be constituted (Alwali) by the use of the Labial, or Lip-Consonant-Sounds. The Lowest Savages talk entirely from the

Throat ; me have arrived at the Niddlemouth, with a slight addition of the LipSounds; "the Coming Man" will talk, in preponderance at the Lips, and will think in accordance, with the doubleness and pliancy of aspect so, symbolically, implied.
Universaloid; see -Oid
Universisy; see -Isy.
Universology; see -Ology.
Uxiversological; see-Ological.
Unoid; see -Oid.
Unicientized, not rendered or made scientific or exact.
Uranology; see-Ology.

## V.

Vacurar, Space deroid of any Plenum or Vis a tergo, (Latin), Compulsion, force from Substance contained.
Variant, having and exhibiting Variety or Viscerism; see-Isy.
Differentiation, from the Environment, Viscerisial; see-Ismal. and as between the Parts, Properties, As- Viscerisuric; see -Ismio. pects and Relations. 'Viscerisycs; see -Ismes.
Vegetisy, the Principle embodied in and symbolized by the Tree, or Plant, or the Vegetable Kingdom at large; Vegetable Life as distinguished from Animal Life.
Tertebra, (Latin, plural vertebre), an individual short bone of the back-bone or vertebral column.
Vertebrate, possessing an interior backbone.

Vishsc, one of the persons of the Hindoo Trinity.
Virelline, pertaining to the Folk of an Egg. Vocabrlary, Dictionary, Glossary. (Latin Vocabulum, 4 Word.)
Volume, Space occupied by any enclosure having the Three Dimensious, Length, Breadth, Thickth ; the same relatively to these three dimensions, whicl Area is relatively to the first two.
Vesicle, a little ressel.
Vice-verss, (Latin), in the reversed order.

## W.

Wedgism; see -Isy.
Wrisoor, The Supreme Intelligence-Element of the Mind; the Counterpart of "Love,"-Swedenborg.

Word, The, the Logos of Plato and St. John, The Scriptures-Swedenborg.

## Z.

Zerorsm, The Principle embodied in and symbolized by the matbematical Zero;

The Spirit of Negativity or Nothing; see Negatism.

## CIIAPTER I.

## GENERAL DISTRIBUTION OF TIIE SUBJECT.

Text. Primary Distribution.-Man and the World, the Compound Universe, p. 1. Definition of Universology, 2. Inpression and Expression, 6. Considerations upon the Division of the Esternal Universe in respect to Thme and Space, 6. Nature, Science, and Art, 7. Philosopiy, Science, and Religion, 9 . Piflosophy of Integralism, 10. Senthent, Dogma, Religiocs Condect, 15. Mind, Matter, Movenent, 16. Analogies between Pinilosophy, Religion, etc., 1 i. Grand Subdivisions of Science, 18. Tendentill and Repetitive Correspond anca, 19. Comte's Distribution of Sociology, 20. The Ethereal or Spiritual Cosmos, 22. Cosmology, Pneumatology, Anthropology, 22. Typical Table of the Universe, 23. Analogy between the Human Body and Human Society contrasted with Comte's Sociological Distribution, 2i. Divergent and Conver.gent Individuality, 29. Warren, Comte, and Fourier contrasted, 30. Their relation to Universologr, the Sciento-Philosophic Revelation of the Laro of God, 34. Swedenborg as representative of the Pneumatological Domain; the Spiritists and Spiritualists, 37. Tendency of Modern Science to the recognition of the Spiritual Constitution of Matter ; Profs. Henry and Loomis ; Reichenbach and Faraday, 33. Hickok, Mill, 39. Universology, the Grand Reconciler of all forms of Thought, as Components of One Compound Truth, the Culmination of God's Revelation and the Harmonizer of Conflicting Systems of Doctrine, 41. General Results of Universology, 44. Morality a Positive Science, 44. Social Integralism and Pantarchism, 41. Swedenborg's Grand and Divine Man, 4.5. Terminhl Conversion into Opposites, 46.
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Ammotrition. Sociology and Ethics defined ; the Science of Religion, 6. Comte's Objective and Subjective, 21. The Features, Heart, Figure, and Gesture, 20.

1. The Universe, as concretely embodied, divides most ostensibly into Man and The World.
2. The World is a Basis, Pediment, or Footstool ; Man is the Statue, Image or Eidolon erected upon it. -
3. The Science of the whole Universe, I denominate UnrVERSOLOGY. c. 1-9.
4. The two grand Departments of Universology corresponding with Man and the World as Departments of the Universe, I denominate: 1. Anthrofology (Gr. Anthropos, Man, and

Commentary, Text 3. 1. The term Universology is liable at once to meet the criticism of Purists in language, on the ground of Hybridity (as from the Latin Universum and the Greek Logos). The corresponding word Sociology has, however, completely overcome this objection, and established itself in scientific parlance. The greater intelligibility of Universology nerer Pantology with nonclassical readers has determined me to the use of the term, and the same principle of decision will be found presiding frequently over my choice of terms; so much so, perhaps, as to form a feature of the work. This is apart from a philosophical defense which might be made of hybridity generally as a means of ultimately ennobling language, instead of corrupting or degrading it. The question is the same as that of the effect of the commingling of all nationalities in the constitution of American Society, as against the older and more "respectable" idea of guarding the national purity of blood. Each party in all such controversies represents one side of the truth, as will be taught in the Text.
2. Other criticisms of a similar kind on literary grounds may as well be anticipated and forestalled. A very free use will be made throughout the present work, and other works to follow and accompany it, of Capitals and other Typographical Appliances for the emphasis of particular words and phrases. This is also, I am rell aware, in derogation of the current and common-place literary rules. This system is not adopted, however, through ignorance of those rules, nor without thoroughly considering the relative advantages of abiding by, and of transcending, them. The New Science will itself contain and teach the Principle in accordance with which the decision has been made.
3. It will show that there are three stages of development in all things, and that the last and highest of these returns to a seeming conformity with the first and lowest stage, but in a new spirit, or with a different purpose:-The Antrthetical Repetition of the Lowest in the Highest.
4. To illustrate.-The Sophomorean or Tyro in literature makes the page glare with capitals and italics, and it may be with exclamation points, to bring out or render salient ideas which he deems important, for no other reason, perchance, than because they are his, unaware that they may be as well known by others, and perhaps even have been better expressed by thousands.
5. This is the first literary stage (Unismal, t. 203), and being Natural, it is nevertheless, or rather indeed for that very reason, Vulgar. The avoidance of

Logos, Discourse) ; and 2. Cosmology (Gr. Cosmos, Worid, Logos, Discourse.)
5. The term Anthropology has been used hitherto in a more restricted sense, so as to apply to the general attributions of the Individual Man, as Phrenology, Temperamentology, Sarcognomy, etc., excluding the ordinary Sciences of Physiology or Biology upon the one hand, and Sociology on the other. It has not, however, become very fixed in its meaning, and it will be far more appropriate and convenient to apply the term to the entire Science of Man, Individual and Collective. For the restricted meaning heretofore given to the word, I shall employ Monanthropology (Gr. Monos, sivgle or sole, Anthropos, MAN, Logos, DISCOURSE). c. 1-5. The following Diagram symbolizes this first Distribution of the Universe into Man and the World.

Diagram No. 1.

this vulgarity then leads, by reaction, to the second stage (Duismal, t. 203), which reproves and chastens the exuberance of the youthful folly. This goes in turn ultimately to the opposite extreme of prohibiting the necessary and proper use of the "Mechanics of Literature," as extra aids in the expression of our ideas.
6. The equally natural and proper revolt against this tyranny of classic propriety conducts to the third stage (Trinismal, t. 203), which is that of the literary independence of the ripened and thorough scholarship which is able appro-
C. When we say Man and World, mentioning Man first and World afterwards, we proceed in thought outward and downward to the Body, and thence to the Earth as representative of the more exterior World. This is the Logical or Ideal Order. When we say the World and Man, we proceed, on the contrary, upwards and as it were inwardly to the Body, and thence to the Head of the Man, which is the seat of the Mind;
priately to judge of the conformity of the means employed to the relative intrinsic importance of the ideas to be represented.
7. In the presentation of an entirely new Science, where often the whole force of a Principle or Radical Thought mas depend upon the right emphasis, not of one but of several parts of the sentence, everything is exceptional and peculiar, and the law of propriety must be sought, not in the current rules of dilettantism in literature, but in the nature of the subject itself, and in a judicious consideration of the best means of aiding in erery way the clear presentation of ideas which may be found sometimes sufficiently difficult, eren whon we have arailed ourselves of all the helps with which the diversity of trpes can furnish us.
8. The criticism, I venture to affirm, will not be made by those who hare mastered the subjects about to be treated of, who will, on the contrars, be grateful for every increased facility in orercoming the intrinsic difficulties. It will be made by those only who criticise by anticipation, and who meeting something which they have been in the habit of condemning-and rightly enough ordinarily-will not in the first instance discriminate with sufficient accuracy the true principles of the philosophy of style, which should be in strict conformity with the exigencies of the subject.
9. Universology teaches the Laws of Criticism, and until these are known, it submits itself, only in a rery partial sense, to those Empirical Rules which are frequently only substitutes for Principles which at the time are unknown.

Commentary, t. 5. 1. The term Physiology is employed in the Text in the larger sense of that term,-General Biology chiefly in its material aspects, or the Science of the human body specifically, and then, by exteusion, that of all organized bodies whatsoever. When, on the contrary, we say Anatomy, Physiologr, etc., enumerating the several branches of Medical Science, we use the term Physiology in a minor sense, for in the larger sense Anatomy itself is a brancì of Physiology. Great confusion exists in the naming of the Sciences from this and similar variety and contradiction in the extension of the meaning of terms. We shall meet with this confusion in other instances where it will be noticed, and so far as may be, rectified, by the suggestion of better Scientific designations. It may be well to adopt the terms-Macro-Physiology (Gr. Malios, great, Phusis, ratere, Logos, discocrse), for the larger aspect of Physiology, and Micro-Phrsiology (Gr. Mikros, small, etc.) for the minor aspect. The distinction mar, however, be dropped when from the context the ambiguity is unimportant or does not occur.
2. The other term coupled in the Teat with Physiology (Macro-Physiology)
and as Man comes up out of the Earth by his natural genesis, or by his historical development in Time, this Ascending Order is denominated the Natural, and sometimes also the Historical Order. (See Diagram No. 1.)

## 7. But ordinarily we do not so much intend by the term Uni-

 verse, Man and the World as objects, or such as they are in themselves ; but rather it is the Aggregate of the Experience,is Biology (Gr. Bios, life, and Logos, discourse). Unfortunately this term has also been popularly applied to a mere branch of "Animal Magnetism"-the transfer of certain life-forces from one iudividual to another-which has also been called Psychology, and for which Mr. Braid has furnished the unexceptionable term, Hypnotism. Apart from the unpleasantness of this association and the duplexity of meaning, the term Biology would be preferable to stand in the Text alone, as its meaning may then be so extended as to include the phenomena of Mind as well as those of the Body. This would be precisely the nature of the term needed to be brought into a Trigrade Scale along with Monanthropology and Sociology. The distribution would then stand as follows:
> 3. Sociologr, Science of Collective Humazity.

> Anthropologi $\{$ 2. Monantiropology (Phrenology, etc., t. 5).
> 1. Biology (extended from Man down to Animals and Vegetables.)
3. This distribution is then cut across by the relation of these Sciences to the abstract Bases, Matter and Mind, respectively. Thus Biology subdirides into 1. Macro-Plyssiology, covering the material aspect of organized objects as hased upon their anatomy and physical function: this, when restricted to Man, is Anthropo-Corporology (Gr. Anthropos, mar, Lat. Corpus, body) ; and 2. Psychology (Gr. Psyche, THe soul, Logos, Discourse), or Anthropo-Mentologr, the Science of the Human Mind (Lat. Mens, amd). Monanthropology and Sociology might then undergo similar subdivisions based upon their Corporeal and Mental aspects respectively. Instead of Psychology the term Mentology is preferable for the larger and universal consideration of Mind, as contrasted with all material considerations (Materiology). It is this discrimination which strikes through the three domains of Biology, Monanthropology and Sociology.
4. Monanthropology, on the one hand a Transition or Connecting Link between Biology and Sociology, is then, on the other hand, a Transition also between Anthropo-Corporology and Anthropo-Mentologs. Phrenology, for instance, a brancli of Monanthropology, receives its name from the Greek word which denotes the Brain, which is a part of the Body, while it deals preedominantly with the consideration of the Mental Characteristics.
5. Ethics, or the Science of Morality, relates to the Individual Man in Societr, or in his relations to life. It is therefore iu a sense a branch of Sociology: More properly, it is a Transition or Connecting Liek between Monanthropology and Sociology. a. I-3.

Knowledge and Use which we have of them in the Mind, which we mean by the term. The Universe is therefore, in some sense, different for each one of us; by a general mental average, however, of the numerous individual conceptions, we come to consider it as one.
8. The Universe may be again defined, therefore, as the Aggregate of the Impressions which the External World makes upon the Human Mind, and of the Reactions of the Mind ; first upon those Impressions, to recast them into the forms of Thought; and then, ulteriorly, upon the same External World which originally produced the Impressions, to reproject them, modified, in the actions of the body and in the products of these, as the means of Use and Beauty.
9. Time and Space are the joint field and negative ground for the display of the objects and facts which constitute the External Universe. c. 1-8.

Commentary, t.9. 1. There is a semi-scientific distribution of all the Contents of the Universe based upon the twofold character of the Negative Ground of Being, namely, as Time and Space respectively.
[over.

[^4]10. The first crude Impressions which the world makes upon the mind furnish substantially the conception which we denominate Nature. The speculations which we institute and entertain concerning them, in the Forms of Thought, are, in the first instance, mere speculations; but when verified and
2. All the preceding views of Man relate to him as a citizen or denizen of this present life-scene, while yet the almost universal Faith of Mankind has ever pointed to another existence after death, which is called Spiritual. All that relates to this present life is then called Temporal, and holds a relation to Time, as the word indicates (Lat. tempus, TRNE), as Spiritual Existence holds a similar relation to Space, or the Spheres, or the Atmosphere.
3. More readily and popularly, Spiritual Existence will be recognized as having relation to Eternity, the counterpart of Time in another sense which still comes back, as it were, to the idea of Space; for the infinity of Time which makes up Eternity, ceases by its exhaustion of the idea of change, or progression, to be apprehended as Trase ; and can therefore only be apprehended-if we can hold fast to that abstruse and difficult idea-as Time solidified in Space, or in the language of Scripture, "Eternal in the Heavens." It is the intuition of this conception which has led to the adoption of the term Solidarity, to express the idea of the whole Universe, or any given Domain of Being, in respect to its Static condition, and its consequent occupation of Space. To this, the term Continuity is opposed, for the idea of the Motic condition and the consequent occupation of Time. The Solidarity and Continuity of any sphere of Thought or domain of Things are thus equivalent to the Space and Time Determinations, respectively, of the matter in question, whatsoever it be. For the former of these terms I am indebted to Fourier, and for the latter to Comte.
4. The question of the immortality of the Soul, or the survivorship of man after death, has hitherto received but little elucidation from Science, and still remains almost wholly within the domain of Faith merely; except with the modern Spiritualists, whose investigations have not as yet been invested with the rank of Science in the estimation of the scientific world properly so called. A flood of light upon the subject may at least be hoped for ulteriorly in the direction of Universological investigations; but without too much promise of immediate satisfactory results in this difficult field of examination, I may, without fear of discredit, claim that any domain of thought and speculation is, in a sense, a proper domain of Science; since the search even after a Scientific Method adequate to the investigation, invests it with that character. I shall not therefore hesitate from the first to include Pncumatology, or the Science of Spirit-Life, among the Grand Sciences of Man, at least in the sense of a legitimate domain for the effort to establish a science, a domain which has always received more largely, perhaps, than any other, the attention of the discursive human intelligence.
5. The whole Science of Man, as related to this life, may then be characterized as Temporology, or Human Temporology, and that of the residence of man in
systematized, they become Knowtedge, culminating in Science. The ulterior reactions of the Mind upon the Exterior World, through 1. the Bodily Activities ; 2. the Creations or Products of those Activities; and 3. the Modifications of the Exterior World accompanying them, correspond with what is called ART, in the most extended meaning of that term; a meaning for which Practical Philosophy is sometimes employed as the more comprehensive and appropriate term.
11. Nature, Science and Art are thus, representatively, a threefold Grand Distribution of the Universe.
the Spheres, whether superior or inferior to the earth-life, or on the earth-level, might then be denominated Spaceology, or Human Spaceology, (or Ex-Spaceology,) from the relation above intimated, which this idea holds to the Domain of Space. (Pronounce Spa-ce-ology.)
6. It may also be at times a convenient discrimination to speak of all the views of the Science of Man which relate to the Individual, and whether in respect to this or any other life, as Individuology, opposing it to the Science of Sociology, whether conceived of as here upon the Earth or in the Spheres.
7. There is still another important Universal Discrimination in Nature closely allied to the Spaceal and Temporal one just described, but one which is so distinct as to require a slight degree of attention at this point, and ultimately to require a very large degree of it. This is the difference between Light and Shade, or again between Day and Night; these states resting upon the question whether a given side of a planet or world is illuminated, or is thrown into the shade. This difference stands also analogously related to Life, as the Analogue of Light; and to Death, as the Analogue of Darkness or Shade. These last two states of existence come back obviously into a close relationship with the ideas expressed by the terms Spiritual and Temporal, drawn from Space and Time; but with an important difference: Spiritual Things are considered from the religious point of view, as that which is truly living, and Temporal Things as a sort of prolonged dying.
8. Light, as associated with the Brow and the Eye, and with Form as seen, coincides with the meaning of the term Ideal (Gr. Eidos, FORM, and Eidō, I see); and Space, as the container of the Atmosphere (Pneuma, Spirit, Arr), is similarly related to the term Spiritual. Ideal and Spiritual are often regarded as almost synonymous; both are opposed to Material. Spiritual is not, however, primitively related to the Brow and Eye, but to the Chest or Thorax, whence the breath proceeds. Spirit is from the Latin Spiro, I breathe. The relation between Ideal and Spiritual results therefore from a relation between the Brow and the Chest both of which are thrown forward into the Light-and are prominent in Space. Shade is associated with the Obscure or Doubtful, as the true and direct opposite of Ideal (Bright, Glorious); as Time is with Temporal, the
12. The Speculations of the Human Mind respecting the Universe, in so far as they rise to the dignity of System, and are not merely chaotic, are again susceptible of a threefold division, relating to that which precedes, but somewhat modified from it. The three Subdivisions of this Order are 1. Pmlosopity, 2. Echosophy (Positive Science), 3. Practical Philosophy (including Art, Government and Religion.) c. 1-3.
13. Philosophy, from its generalizing character, similar to First Impressions from the Exterior World, is allied with Nature; Echosophy, as the Spirit of Particular Investigation, is allied with Science; and Practical Philosophy, as the Spirit of Doing, is allied with Art. The simplicity of these alliances is, however, disturbed by the fact that Philosophy
direct opposite of Spiritual; (Spacic, pertainining to "The Spheres," Atmospheric).

Commentriry, t. 12. 1. The term Positive Science is employed to designate all systematic knowledge of the kind which has been verified after the rigorous methods of Close Obserration, Experiment, or Demonstration, which characterize Science as differng from mere Speculation, Intuitional Beliefs, Hypotheses, more Theory, or any of the less certain or less intellectual methods of knowing or halfknowing. Philosophy begins with Speculations of a less exact character, while they are correspondingly more broad or universal, and become more and more scient1fic or positive at the conclusion of its carecr, at which it undergoes a change-A Terminal Conversion into Opposites ( t .83 ), and becomes what may be appropriately denominated Scrento-Pumosopif, which is then the fountain-head of all the Sciences.
2. The terms "Positive," "Positivist," and "Positivism" have been, however, appropriated by Auguste Comte, and applied to the System of "Philosophy" and "Religion" founded by him, based on the ideas of Positive Science, but containing many things to which scientific men generally do not choose to be committed. Herbert Spencer, for example, has felt compelled to free himself from the imputation of being a disciple of Comte, while yet he claims to be a Positivist in the primitive or unsectarian use of the term. (1).
3. To aroid the embarrassment resulting from the doubleness of the meaning of these terms, I suggest and shall employ for the primitive meaning of Positive Science, the new term Ecmosopiy, from the Greek echein, to have, and sophia, wisdom or knowledge. This will contrast very farorably with PiriLosoprix, from philein, To Love, and soplie, WISDom, the modest name by which the early Philosophers chose to designate their clevotion to and search after truth.

1. The Classification of the Sciences, to which are added reasons for dissenting from the Philosophy of M. Comte, by Herbert Spencer.
seeks to go back of, and, in that sense, below and beyond Nature, to the region of Substance and Cause, as the fundamentum or background of Nature; or that from which it proceeds. Philosophy in this sense, therefore-and the term is most frequently so applied-is related to, and is synonymous with Metaphysic(s), (Gr. Meta, beyond, and Phusis, Nature). In so far, on the contrary, as Philosophy remains in direct contact with Nature-a wholly different kind of speculationit is known as Natural Philosophy. It is then simply a generalized aspect of Positive Science.
2. Science proper, as both Positive and Exact, speculates and definitely learns concerning the Laws and Phenomena of Actual Being. It intervenes between Nature, or the Domain of Natural Philosophy which is its base, and Action or Art, the Domain of Practical Philosophy, which, as stated above, is projected from Nature and Science. The Philosophy of Integralismir, which will be introduced in the present work, includes and co-ordinates all of these departments of the Speculative Scope of the IHuman Mind.
3. Practical Philosophy, however,-the larger or more inclusive term than Art, (as this term is usually employed), relates to all Doing, or to the Execution of Projects of all kinds, but more especially to Government and the Grand Administrative Affairs of Mankind. The following Table will illustrate, with some enlargement of detail, the preceding distributions. (For references to the Commentary see Table.)
[^5]
## TABL开1。


16. An abstract of the preceding Table may be made from the Beginning, the Middle, and the End of it; as follows:
3. Religion.
2. Science.

1. Philosophy.
of the Subject-matter of Philosophy; as, on the contrary, we say most frequently, Laws and Phenomena, in the Plural Form, when speaking of the Subject-matter of the Sciences.
2. The term Uni-variant denotes the Integration of these two phases of development-the Pluraloid combined with the Singuloid. Integral is a still larger word, meaning that which relates to all the aspects of a subject collectively or distributively considered; or Uni-variantly, as between these two; that is to say, the Distributive and the Collective aspects conjointly.
3. It may be observed here, once for all, that throughout the present work and other related works the Tabular Matter will require, as the rule, to be read from below upwards, as the Numbers at the side of the page will indicate. If the order is at any time reversed, the reversal will then be indicated by a similar reversal in the order of the Numbers, so that they will then read from above downwards.
4. This arrangement is important as corresponding with, and indicating the fact, that the Principles at the bottom of each Table are a Foundation upon which those higher up in the Table arise as an Edifice. This will become obvious in the progress of the work.
5. The Tables and Diagrams will also have Head-Numbers throughout, as a means of more casy and definite reference.
6. Matter which simply falls into numbered paragraphs, will not for that reason be regarded as Tabular.
7. Logic, in the sense of "Formal" or School, or Syllogistic Logic, might also
8. Religion is, so to speak, the pure product or essence of all knowing, arrived at in part by anticipation, or in adrance of Philosophic and Scientific Methods, through Inspiration, Revelation and the deepest use of the Subjective Intuitions of the Soul ; awaiting, however, all the possible accumulation of Knowledges from Philosophy and Science in order to its own ultimate perfection and the attainment of its own highest results. The purport of Religion is to unite the Individual Soul of Man with God, conceived of as the Spiritual Centre of all Being, and through that central conjunction to bring the Individual into true relations with all other Individuals, and so with Human Society, and with the Universe at large. Theology, or the Science of God in so far as He may be known, (Gr. Theos, God, and Logos, DIScourse), is therefore the Central Scientific Aspect or Department of Religion. Around this there is gathered a body of Doctrines, or a Creed; and this Creed or Faith corresponds with, echoes, or answers to, or repeats Knowledge or Science, as this last occurs within the Larger Distributions of the Universe above given. This will be shown in what follows.
9. Philosophy, while it covers the same ground as Science,
with propriety be denominated Catalogic (Gr. Kata Downward, Lower, and Logos); as contrasted with Analogic (Gr. Ana, UPWARD, HGGEER, and Logos)-the Lower and the Higher Logic respectively. Logic might then remain in a sort of fortunate Ambiguity, applicable to both, as the genus of which they are species. The ground of the distinction between Analogic and Catalogic will be shown later in the present work (t.e21), and more fully still, elsemhere. Under the present suggestion, the following arrangement replaces that in the Table.

$$
\text { Logic. } \begin{cases}\text { 2. } & \text { Analogic. } \\ \text { 1. Catalogic. }\end{cases}
$$

8. Or, finally, the term Pantologic (Gr. Pan, Pantos, all, and Logos) might be substituted for Logic in the Universal or Generic sense. John Stuart Mill has recently well vindicated the claim of Logic to mean more than Syllogistic Logic (Catalogic) ; he has shown that this More and Higher is identical in Principle with Induction, and this in turn with Analogy (Analogic) (1). It is surprising, however, that, along with Comte, he despairs of discovering any Unity of Lavo between all the Domains of Being, Matter and Mind, for instance (2). I appre$\begin{array}{ll}\text { (1) Examination of Sir Wm. Hamilton's Philosophy, Vol. II. pp. 159-65. } & \text { (2) Ibid. Vol. VI. pp. } 85-6 .\end{array}$
that is to say, while it considers the Whole Universe, or the Totality of Being, concerns itself, nevertheless, in preponderance, or more especially, with Mind ; so that Metaphysics, which is the other name for Philosophy, signifies practically, or most frequently, no more than Ifcntal Philosophy.
9. Science, on the other hand, while it claims to include the whole Universe within its field or domain;-while even, in theory, it recognizes Material and Mental Science, respectively, as the two equal halves of that domain,-devotes itself, nevertheless, by a natural tendency, in such immense pre-
hend that it will not be long before, by one of those great Transitions, Revolutions, or Terminal Conversions, which he indicates (1), it wiil come to be regarded as "Inconceivable," that there should noт exist such a Unity; or that Absolute Law or The Universal Logic should be different according to the different Domains; or should depend, in other words-otherwise than as Applied Science always depends upon the corresponding Pure Science-upon the accident of the Dowain in which it may chance to be found operating, somewhat as if Gravity were one thing at the Earth, a different thing at Jupiter, etc. Instead of the definitive triumph of Bacon over Descartes (2), an Integral Plilosophy must be the reconciliation of Bacon with Descartes.
10. Under the preceding suggestion the bolder readjustment of the whole Domain of Abstract and Exact Science would then stand as follows:

## 3. Tie Logic of Mathematics or The Metapiysics of Mathematics.

2. Mathematics.
3. Pantologic $\left\{\begin{array}{l}\text { 2. Analogic. } \\ \text { 1. Catalogic. }\end{array}\right.$
4. The last and highest of these-the Metaphysics of Mathematics-is then the Applied Pantologic, but still within the Abstract Domain, that is to say, it is applied to The Matimematics. Professor Davies has a work entitled "The Logic of Mathematics." Mr. Mill refers us (3) to De Morgan's Algebra for what may be regarded as a coutribution to this Science; but of the full and enlarged meaning of this name-the Logic or the Metaphysics of the Mathematics -the whole scope and drift of the present work will furnish the best and only illustration,-and especially the Third and Fourth Chapters.
5. I have allowed the simpler distribution of Exact Science to stand in the Table of the Text, because, while in a sense accurate, it is more properly transitional from existing ideas;-Logic and Mathematic being the two Sciences, which Spencer, the latest Classifier of the Sciences, has assigned to the Abstract Dontain.
(1) Examination of Sir Wm. Hamilton's Philosonhy, Vol. I. pp. St-5. (3) Ibid. Toi. II. pp 3:s-31. (3) Ibid. Vol. II. p. 53.
ponderance to the investigation of the External Material Unirerse, that it is as intimately and as rightly associated with Matter and materialistic tendency, as Philosophy is with Mind and purely ideal speculations.
6. Religion, again, covers the same ground; that is to say, it embraces, in its own way, the total Universe, and strives even to go beyond the Universe,-inasmuch as it limits the meaning of the term by excluding the Divine Being, and to hold in its embrace the conception of God as a Being who transcends the Universe, and is, so to speak, above and apart from it, while yet within it by relation, as its Centre and Source. For the existence of such a Being, the appeal is made in part by Religion to Philosophy and Science; or to reasonings which tend to conduct the mind to this inference or result ; and in part to Faith or Primitive Belief ; or, in other words, it rests this part of the claim upon a direct appeal to the Intuition. The Knowledge-Domain of Religion is therefore tacitly admitted to be imperfect,-as Knowledge; whence it is denominated Dogma, Doctrine, Creed or Faith,and not Knowledge, except in the composition of the word Theology above noticed. (t. 17.) The time is indeed prophesied of, in the Scriptures, when Faith shall be superseded by a more perfect Revelation of Truth. "Faith is the substance of things hoped for, the evidence of things not seen." (1) "For now we see through a glass darkly; but then face to face ; now I know in part; but then I shall know even as I am known." (2) "For we know in part, and we prophesy in part. But when that which is perfect is come, then that which is in part shall be done away." (3).
7. Still, while speaking within the Domain of Religion, and with reference to the subdivisions of that Domain, it is the Doctrine or Faith of the Church which stands representatively for Knowledge or Science. Religion rests fundamentally upon the Instincts and Intuitions of the Human Sóul,

[^6](2) 1 Cor. xiv. 12.
(3) 1 Cor. xiii. 9, 10.
along with the belief in Existence and our other fundamental beliefs;-subject like them to immense transmutations in the forms of its development through the Feelings, the Intellect, and the Life. These Instincts and Intuitions, in their undifferentiated Mass, are the Common Consciousness of the Mind. In so far as this offers a ground for the Superstructure of Religion, let us call it The Religious Instinctual Basis.
22. Above this Instinctual Basis, Religion undergoes a three-fold distribution, as follows:

1. The Sentiment or Feeling of Religion; "the love of God shed abroad in the Heart," prompting to Worship, and to the performance of Deeds of Charity towards men.
2. The Dogma, Doctrine or Creed, semi-scientific and semi-credensive or faith-giving. Considered in its most Scientific Aspect, this is Theology. Otherwise, it is the Faith and the Hope which are associated with Charity in the Christian Trio of the Leading Virtues.

## 3. Action, or Religious Conduct.

23. This last subdivides as follows, into
24. Worship ; the External manifestation, by acts, symbols and vocal expression, of the Interior Sentiment or Emotion. With these are coupled the Exposition of the Faith, or Preaching, Exhortation and Homily, or appeals to the higher moral sense ; and pre-eminently Prayer, or the Invocation of Blessings, especially of the Influx from God of the Spirit of Unity with Him. Prayer is the utterance of the Desire of the Soul. These are, collectively, the External Service or Cultus, the maintenance of which in Society is preserved in the Church, and is usually entrusted to a special order of men called the Priesthood.
25. The Religious Life; the Daily Walk and Conversation; the practical outworking of that which is symbolized and invoked in the worship.
26. Religion thus ultimates it.self in the Life, which is the grand or final form of Individual and Social Actron or Move-
ment. Religion has, therefora, the same repetitory relationship or Correspondence with Movemevt, by the preponderance of its meaning, which Philosophy has with Mind, and Science with Matter,-as indicated by the Decussating lines in the Table below, in which these Correspondences are appropriately exhibited.

TABLE 2.

1. Abstract Constituent Entities of the Uriverse.

## 2. Corresponding Systems of Euman Relationship to Universal Being.

3. Religion.
4. Mind.
5. Matter.

6. Science.
7. Philosophy (Metaph. Psych.) (t. 30.)
8. It will also be perceived, by recurring to the Subdivisions of Religion above made, that they precisely accord with the Fundamental Subdivisions of the Mind (in Philosophy) as established by the Metaphysicians, Kant, Sir William Hamilton, etc., namely, into 1. Feeling, 2. Knowing, 3. Conatron ; and also that both of these answering series of Subdivisions, -within the Domain of Religion and that of Metaphysical Psychology respectively,-are no other than echoes of the Primitive Distribution of the Constituent Entities of the Universe, as exhibited in the above Table, namely, into 1. Matter, 2. Mind, 3. Movenent. The same is true of the Subdivisions of ScIence, which is intermediate between Religion and Metaphysical Philosophy. (Table 3, t. 27.)
9. Matter repeats, echoes, or corresponds, more abstractly, to the World, as a Concrete Factor, and the Material Basis of the Total Universe. Mind repeats, echoes, or corresponds abstractly, to Mans, as the remaining Concrete Factor, and the Intelligent Inhabitant of the same Universe. Movement is the Motic and Time-Filling Resultant or Product of the two Factors, Abstract or Concrete ; and is allowed, for its vital supremacy, to stand in the Scale in preference over Existence,
which is the Stcitic and Space-Filling Resultant or Product of the same set of Factors or Constituents. Existence and Movement are Static and Motic respectively, and have corresponding relationship to Space and to Time. They are the Solidarity and the Continuity of the Universe respectively. (c. 3, t. 9).
10. The Subdivisions of Philosophy, Science and Religion, and the paralleiism of these several Subdivisional Series with the Primitive Distribution of the Factors or Constituent Elements of the Universe at Large, may be tabulated and strikingly exhibited, as follows:


> Agoregate World The Common Consciovsof Somatology. Genbutes and Relantions.

Inst. Religious Rasis. Intuitions. Piatmitive Beliefs.
28. The following Table exhibits the Pluraloid or discriminated portion of the preceding Table (II. Table 3) in a somewhat condensed form. The Numbering in respect to the First Two of the Three Elements in each Group,-which two are in each case the Factors or Constituents,-is here (in the next Table) reversed, or proceeds from above downwards. In other words the Logical, instead of the Natural or Historical Order, is adopted. The Third Element of the Group, the Resultant or Product, is not affected by this change of order. The Metaphysicians, who are also Logicians, adopt instinctively the Logical Order. They speak therefore of 1. Knowing, 2. Feeling, 3. Conation, and treat these subjects in this order, -not 1. Feeling, 2. Knowing, 3. Conation.

29. In the following Table the arrangement of the Items in the several Groups of Elements is again modified or raried. An inspection of the Diagram next to follow,-No. 2, (t. 41)will reveal the fact that the Middle Abstract Term, or the Item of the Group which is numbered 2. in the Natural Order, and 1. in the Logical Order-Mind, (Knowing, Intelligence)-is carried up along the Mid or Median Line, above, and is there concretely embodied as The Head, in the Institution of the Human Figure. This converts what has been presented as a Horizontal Division into a Perpendicular one. The arrangement in this Table (immediately following,No. 5), is made to conform, by anticipation, to тнат procedure of Nature, in both these respects. The Elements are perpendicularly divided, (separated to the right and left), and the Middle Item is lifted to a higher level.

30. Philosophy has been previously spoken of as allied with Mind (t. 18) ; and Science as allied with Matter (t. 19) ; and these alliances are again indicated in Table 2 (t. 24), by the introduction into that Table of lines decussating (or crossing), so as to connect Mind with Philosophy, and Matter with

Science respectively. But, in addition to these inclined lines, there are level lines introduced into the same Table, in such a manner as to indicate a direct alliance between Matter and Philosophy, and between Mind and Science, and between Religion and Movement, such as we have seen prevailing in the subsequent Tables and Explanations.
31. This complexity, or seeming contrariety of Analogies, results from the fact that there are two kinds of Correspondence. Science corresponds with Matter or Materialism in the sense that it tends towcards Matter, as its Natural Objective, or subject of Investigation. This idea may be expressed by saying that Science corresponds with Matter, tendentially; and I shall distinguish this kind of Correspondence by the Technicality, Tendential Correspondence. But Science corresponds with Mind and with Knowing, the Scientoid Faculty of Mind, repetitively, as being virtually the same in Find, or as holding the same place in its own Correspondential Scale or Gamut of Distribution. I shall use for this kind of Relationship the technical phrase, Repetitive Correspondence.
32. To illustrate these subtle differences, which will prore very important Universologically: Man corresponds to Woman in the sense that he is organized correlatively, or by an answering adjustment to her organization; for which reason they tend to each other as Counter-adaptations or Counterparts. This is Tendential Correspondence, and implies Difference, in predominance over Likeness. One Man corresponds to another Man, or one Woman to another Woman, on the contrary, in the sense that they are like or repeat each other. This is Repetitive Correspondence, and implies Similarity in preponderance over Difference.
33. Objects which correspond tendentially are antithetic or opposed to each other, as the face of a man and its image in a mirror. Objects which correspond to each other repetitively, look, so to speak, the same way, like the faces of two soldiers marching in the same column.
34. Changes of Order, as from the Natural to the Logical Order, frequently occur, as previously noticed (亡. 28), in passing from more General to more Special Distributions, or to the Subdivisions of larger Domains. This happens in accordance with the abstruse operation of Principles which it would be premature to investigate at this point. It is proper, however, to observe here, that the second Item or Step of the Scale, speaking in the Natural Order (t. 29) becomes, in the view of many Philosophers, the basis of their speculations, and, in that sense, it may be placed appropriately at the bottom of the Scale, as in the Table in the next following paragraph (Table 6, t. 35). This is as if one should investigate the Human Figure inverted, or standing upon its Head,-or himself positioned above the Head, and looking downwards, as if that direction were $u p$.
35. Auguste Comte, the founder of "Positivism," or the "Positive Philosophy," and the "Positive-Religion," and who has sometimes been denominated the Bacon of the Nineteenth Century, from the Encyclopedic character of his Speculations, has adopted and adapted the threefold Division of Mind from the Metaphysicians, carried it over into its legitimate application to Society, and made it the basis of his Primary Distribution of the new Science of Sociology. The following Table exhibits the Three Heads under which he considers the Constitution of Society :

$$
\text { TABLE } 6 .
$$

3. "Action," $=$ Will and Desire, "Dynamique."
4. "Sentiment or Affection."
5. "Intelligence" = Mind, Science, Theory, "Statique."
6. This writer's great Treatise on Society (Politique) and "La Morale" (Ethics) covers the ground, after his method, of what I have above denominated Anthropology. It treats, in a sense, of the Universe, from the point of view of Man outwardly to the World, which Order he calls the Subjective Method.

This work he denominates his "Principal Elaboration," and confers upon it the name of Positive Politics ("La Politique Positive"). This he has preceded by an Immense Scientific Preparation of a lower order, in which he treats encyclopedically of the whole store of the world's accumulated intellectual wealth. He undertakes also to establish a Hierarchy or Natural Ascending Order of the Several Sciences, culminating in Anthropology, and especially in the Societary and Ethical Branches of it. This Preparatory Work and Basis he denominates his "Fundamental Elaboration," and also the Positive Philosophy ("La Philosophie Positive"). He does not intend, however, to include, but expressly excludes, Metaphysical Philosophy, and defines that what he means by the term Philosophy is that which in England has received the name of Natural Philosophy. This Elaboration is conducted in the Order from the World to Man, which he denominates the Objective Method. a. I-3.

[^7](1) Preface to Politique Positive, Vol. I. p. 4.
37. It is obvious from what precedes that the Fundamental Elaboration or "Positive Philosophy" of Comte corresponds -but in part only, however-with what I denominate Cos-mology,-the Science of the Great Basic Department or Aspect of Being upon which the Domain of Anthropology supervenes.
38. Intermediate between Anthropology and Cosmology, in a sense, but in a sense also transcending them both, there is another Great Domain of Being; almost wholly omitted by Comte, and by the Scientific World at large, and which has hitherto held a dubious and mystical position somewhat between Knowledge, Faith, and Superstition. I mean by this, the Spirit-W orld; whether as the Ghostly Collection of a Disembodied Humanity, or as the Attenuated and Ethereal Cosmos which these Spirits inhabit. That there is such a World with its Inhabitants, and that both it and they are susceptible of a Scientific Enquiry and Treatment, by the Methods of Analogy herein to be instituted,-and, as it were, a priori, or apart from the direct testimony of Observation, -will be assumed, from this point onward, in the present work, and the justification of the assumption left to the gradual accumulation of the proofs to be adduced.
39. The Science of this intermediate Domain I shall denominate Preumatology ; and as this Domain repeats the whole of the Outer Universe, this Science will undergo corresponding Subdivisions, as Pneumato-Anthropology, Pneumato-CosMOLOGY, etc.
40. The Comparison between the Main Divisions of Universal Being as here sketched, and those made by Comte, is exhibited in outline in the following Table, the details of which will be gradually expounded in the remainder of the present Chapter and further on.

[^8]
## TAB工无7. <br> TYPICAI TABLE OF THT UNIVERSE, c. I-3.

III.

1. Universological Distribution.
2. "Positivist" Distribution.

| 3. Actiox. Acts. Conduct "Dynamique." <br> 2. Affection. Sentiments. The Affective, (Affectional) Life. |  |
| :---: | :---: |
|  |  |
|  |  |
|  |  |

1. Intelligence. Thoughts, Ideas, Theory, Mind. The Head. "Statique."
2. BIOIOGY: Table of Cerebral Functions,-Comte.

An undeveloped Theory of a Subjective Humanity. The Spiritual In. fluence - more or less conceived of as personal-of the Ancestry of the Race; or of the Dead.
" Philosofite Posttive."

2. Astronowy.

1. Mathematics.
2. ARTO-PHILOSOPIIF. Interblending of Naturo-Metaphysic and Scicnto-Philosophy.
3. Directional,-Direct, Inverse, Compound.
4. SCIENTO-PHILOSOPIIY. Metaphysics of Mathematics, - Andrews.
5. Geometrical,-Round, Straight, Composite.
6. Numerical,-Unism, Dutism, Teinism, 1 ; 2.
7. Artoid. - Hickok - Forces, Antagonistic and Diremptive.
8. Scientoid,-Kant.-Quality, Quantity, Ficlation, Modality,-1; 0 .
9. Materioid, - Old Greek. - Earti, Atr,
Fire, Water-Thales, Anawimenes, etc.

NEGATIVE GROUND-Negato-Absolutoid. - Old Hindoo Philosophy. (Chinese, Persian, Egyptian, etc.) See Vocabulary, w. Psychology.
41. The following Diagram, resumed from Diagram No. 1, and somewhat modified, will forward the explanation of the preceding Table.

## Diagram No. 2.

## TYPICAL TABLEAU OF THE UNIVERSE.



Commentary, t. 40 (Table \%). 1. The Representative names, as Hegel, Gall, Fourier, etc., introduced into the Table, are such as are specially identified with the particular Principles or Domains.
2. For Convergent Individuclity the Single term Mutuality, or Collectivity (of Society), may be substituted. The Unity of Society is often spoken of in this sense, but it is too ambiguous a term for a Technicality. It may mean (unismally), the Unity-aspect, or Collectivity, or Convergent Individuality, as Contrasted with, and Contrary to, (Divergent) Individuality; or it may mean (trinismally), the Unity of Society as based upon, growing out of and yet reaching down to and embracing the (Divergent) Individuality or Variety-Aspect of the Social Constitution. For Divergent Individuality the Simple term Individuality may suffice when the Contrast between the two kinds of Individuality is not in point. The term Individuality, naturally tends to denote Divergency or Independence mainly, -especialiy as associated with "The Sovereignty of tee Individual." (1).
3. Psychology or Mentology, as limited or confined to the Mind merely, is, in a sense, a branch of Biology, and is so reckoned by Comte; but as the Logic or Law of Mind tends powerfully to declare itself as the Law of Universal Being,

[^9]42. The Head of the Man is the Type, Symbol or Analogue of Intelligence or Knowing. The Left Side, or the Hearit, is the Analogue of Love, Affection or Feeling. The Right Hand, armed for Action, is the Type of Action, Execution or Accomplishment. (Applied Science). These Analogies are probably too obvious to require an elaborate exposition. Instinctively we vindicate them in our habits of speech, and illustrate them every hour. We speak of a Man of Brains, or of one who has a Head, meaning simply a Man of Intelligence. The Heart is everywhere the symbol of the warmth and of the throb or thrill of Affection, and the Right-Hand is the symbol of Power. We see, then, putting analogically the Whole In-
or to develop itself into the Universal Logic, or Transcendental Plilosophy or Metaphysic-terms in a great measure equivalent to each other-Psychology has always stood, as previously observed, (t. 18) intimately associated with Metaphysics or Philosophy as popularly understood. In this sense it belongs at the Basis or Bottom of the Table. Again, as expressing itself analogicaler, through the Forms of the Body, as in Phrenology, the Science of Mind belongs still elsewhere, namely, to Monanthropology.

Annotation, t. 42. 1. The Traits of the Countenance (Fr. Tirer and Traire, Lat. Traho, To Draw), and the Features, (Sp. Fac-ciones, It. Fat-tzzze, from the Lat. Fuc-ere, 'To Make), as distinctive of the Head and Face, indicate the Delineation and Organization or Carpentry of the Whole Body;-the Drawing and Outlining, and the Make-Up and Constitution of the whole Fabric or Structure ; of which the Face or Countenance (Lat. Con, Together, and Tenere, To Hold), is as a Tible of Contents (Con and Tenere) ; or as an Index to a Book; or as the Front and Representative Presentation of an Edifice. The Organization or Constitution itself so indicated or signified (indexed) is only revealed fully through Anatomy, or the Cut-Up of the Structure, as the Interior Plan of any Structure or Mechanism is revealed by cutting it or taking it to pieces.
2. The Internal Function is then allied with the Heart and the Circulation of the Blood, and hence with Pirysiology, (Gr. Phusis, Nature) as stated in the text, and the External Mechanism of the Limbs and Trunk, with Doing, Execution, Performance or ART.
3. The Permanent Organization, related to Anatomy, is the Static Aspect of the Body, allied with its Shape, Form or Idea; the Internal Functional, related to Physiology, is allied with the Sentiments, Feelings or Emotions, ("The bowels of Compassion," etc.), and is SUbMotic; and finally, the Trunk and Limbs, as the total or completed Mechanismus, related to Calisthenics, Gymnastics, Labor and Play, is allied with Motion specifically, and is therefore the Motic Aspect of the Body.
dividual Human Body for the Body Corporate or the Domain of the Science of Sociozogy, what it is that Comte has furnished us, by Analogy, as his Fundamental Distribution of Society. To say that it is Intelligence, Sentiment or Affection ; and Activity or Action, is the same as to say that the Fundamental Distribution of the Body is, into Head, Heart and Hand. But this, more largely interpreted, is an immensely important, and in a sense truly, a Fundamental Distribution; for, 1. By the Head, with its featured character or determinate traits or lines is again meant, by another stretch of analogy, the segmentation or sectionizing of the Whole Body, (a. I.) and it comes therefore to be the symbolical representation of the idea of Anatomy or the Cut-up of the Body, (Gr. Ana, through, and Temnein, to cut) ; 2. The Heart, collectively with the Heart-Beat, or the rhythmical function of the Body, -the Diastole and Systole of the Heart, in the supply and distribution of the blood-is that System of the Body which is representative of Physiology ; and 3. or finally, the RightHand, as symbol of the Combined Activity of the Body as a systematized Organismus, represents the Common Functionality of the Body, not within, as Physiology (Nature), but externally, as Doing, Performance or Art. (a. 2-3).
43. Anatomy is Scientoid; Physiology is Naturoid; and Gesture or the Movements and Applications of the Body, as a perfected Instrument of Use, Artoid. c. 1-14.

Commentary, t. 43. 1. Every Science requires to have an appropriate Nomenclature or Terminology, and erery new Science must frame one adapted to its wants. Universology comes under the same necessity in this respect as the other Sciences.
2. To express any department of the Unirerse, any scope, sphere, collection or aggregation of things uchatsoever, I adopt the termination, -ISMUS; somewhat as in German they say Organismus, for what we have heretofore denominated an Organism, that is to say, a Substantive Apparatus consisting of Organs functionating together for a common end. Thiṣ termination (-IsMus) is therefore equivalent to, - dom or Domain.
3. From this Substantive Termination -Ismus is formed the Adjective Ending -ISMIC (changing us into ic), for that which relates to the given Department of the
44. The leading distribution of Society made by Comte; after the corresponding distribution of the Mind made by the Metaphysicians ; and correspondentially with the above Physical Distribution of the Individual Body; and again, by

Universe or Collection of Principles, Ideas or Things. Thus, for example, by the Naturisyus of the Universe, is meant that Department or Aspect of Being in whatsoever Domain of the Universe, which corresponds with those crude First Impressions which we call Nature, as stated in the Text (t. 9). By Screntismus is meant that Department or Aspect of Being which corresponds with, or is characterized by, Exactitudes like those of Science (as, for example,-in Concrete Spheres,-the Regularity of Crystals, or the Reflection and Refraction of Light). By the Artismus is meant that Department or Aspect of Being in which there is the preponderance of Graceful Forms, or of corresponding Principles. Naturisnic is then, therefore, that wohich relates to the Naturismus, etc.
4. To express the Abstract Principle which prevails or predominates in, and characterizes any given Department of the Universe, or any Thing or Aggregation of Things, I employ the termination -ISM, which becomes an Adjective by the addition of -AL, making-ISMAL, and then denotes that which relates to the Principle in question. Hence the terms Naturism and Scientism are used to denote the inherent and governing Principles of the Naturismus and the Scientismus respectively. Naturismal and Scientismal are the corresponding Adjectives.
5. Finally, for a single Object or Thing which embodies and is a Haterial or Real Type of an Abstract Principle, the termination -oid (Gr. Eidos, Forn, LikeNESS) is added, as a Naturoid, a Scientoid, etc. A cube is, for example, a Scientoid, or the Analogue of the Scientismus in the primitive distribution of the Universe, as will be explained elsewhere (t. 776). The termination -oid makes the Adjective in -oIdal, meaning that which relates to the thing denoted by the Substantive.
6. But -oID, as itself an Adjective Termination, continues to mean-as it is now extensively employed in The Sciences,-like or similar to.

RECAPITULATION.

| Substantives. | Adjectives. |
| :--- | :--- |
| -ISMUS (Department). | -ISMIC (relating to a Department). |
| -ISM (Principle). | -ISMAL (relating to a Principle). |
| OID (Thing). | -OIDAL (relating to a Thing). | -oid, that which is like or similar to that which is named.

7. The termination -oID (contracted -ID) will be used to denote any Object or Thing characterized by the Property named, and this, changed to -IT, will then denote the corresponding Abstract Conception. A Un-ID is therefore any Individualized Object, or real Unit; while Un-IT will continue to signify, as now, the mere racant ideal of an Olject,-representative of any object which may afterwards be supplied to it-the mathematical Unit, in fine. So, Diametr-ID
analogy, with the leading Sciences which relate to the Body; is therefore of a great, and-in a Common as distinguished from a more Radical Aspect of the Subject-of a fundamental importance in the true constitution of a Social Science. Comte
denotes a real Axis or Central Beam, and Diametr-it an Abstract Line centering any object in a similar manner.
8. By this simple adjustment of Terminations a great number of new words is formed, without the aid of which it would be very difficult, if indeed not entirely impossible, to convey a clear understanding of the discriminations which it is necessary to make in the proper treatment of Universology.
9. By the operation of the new Terminology, the English word Organism becomes sometimes Organismus as in the German from the Latin, and sometimes. Organismoid, according to the special sense in which it is used; while Organism is reserved to signify the Organic Principle,-the Principle which presides in Organic Spheres and Things, and makes them differ from Inorganic.
10. By Naturism is meant the inherent and governing Principle in the Naturismus; that is to say in the Realm or Domain of Nature or of Reality and Actuality, or of Things and Events;-or in some Echoring Department of Science or Art.
11. By Scientism is meant the inherent and governing Principle in the Scientismus ; that is to say in the Realm or Domain of Science, or of the Limitations and Measurements of Reality and Actuality, as Number, Orcler, etc., or ina word, of Law; or in some Echorng Department of Nature or Art.
12. By Artism is meant the inherent and governing Principle in the Artismus; that is to say in the Realm or Domain of Art, or of Harmony and Beauty, or of Symmetry and Pleasing Proportion between Reality and Actuality, on the one hand, and the Law governing their exposition or development on the other; or in some echong Department of Nature or Science.
13. Where one Noun is qualified by another in a compound way, it is usual to terminate the first noun in the vowel $o$, as in Sciento-Philosophy. This signifies the Scientific half or branch of Philosophy. It halves or fractionizes, therefore, the meaning of the second term. But there is another class of cases in which a compound is needed to signify the Joint Domain resulting from the addition of the meanings of the two terms. For this purpose I change the connecting rowel from $o$ to $a$. Thus Scienta-Philosophy would signify the joint Domain compounded of Science and Philosophy (called in the Text sometimes The University,-putting the Institution for the Domain).
14. A totally nero Lingual Department arises out of Universology itself, and will furnish the ulterior Thesaurus of the Technicals of the Science, in turn. This new Scientific Universal Language (Alwato) receives some preliminary exposition in the Vocabulary; see the word Tikiwa. The Nomenclature here introduced is therefore in a sense transitional, although it may be absorbed into the new Language and remain more or less permanent alongside of terms more rigorously constituted. (See also "Structural Outline," to follow this work.)
has therein virtually discriminated between the Anatomy, the Physiology (or Interior Functionology), and the Gesturology (or External Functionology) of Society. In this he has made a great and valuable contribution to the constitution of the final and completed Science of Society. He has done well this immense preparatory work, and for this he deserves and will receive the gratitude and applause of the world in the coming ages. All this labor, as that of all the other Great Thinkers of the Past, is unhesitatingly appropriated by Universology.
15. It is indeed said by Emerson that the greatest Man is he who is most greatly indebted. If the greatness of a Science or of a System of Philosophy can be measured by the same test, then should Universology and Integralism be classed as the Greatest of Sciences and of Systems on that ground ; but to the accumulation and co-ordination of the labors of all past thinkers, Universology with its accompanying Philosophy will add also their own immense contribution of original Discovery.
16. This Basic Societary Distribution of Comte is, however, as above intimated, a distinguishing between certain very general Aspects of Society merely,-symbolized by the Head, Heart, and Hand,-as if these wore, or composed the whole Body. It is therefore a Generalized or Discursive Kind of Discrimination, as contrasted with another which is, at least, equally Fundamental, and which is far more Distinctive and Exact. Comte's Discrimination is, in other words, pHilosoPIIOID, or NATUROID, as against this other, which is about to be made from the Universological point of view, and emphasized, and insisted upon, and which is specifically Scientord. The distinction now in question is that which intervenes between the Individuality and the Mutuality (-Relations) of Society; or between the Centralizing and the Decentralizing Tendency ; or technically and precisely, between the Divergent and the Convergent Individuality, out of which the

Composite Integrality of Society is inherently constituted. Comte's Discrimination is indeed derived, as I have already pointed out, from those very Metaphysicians, or Indeterminate Philosophers, upon whom he, as a Positivist or Scientist, has as it were lavished his contempt, for what he regards as the vagueness of their speculations, and the barrenness of their results.
47. It is apparent from the Diagram (No. 2, t. 41), that there is another and more exhanstive Distribution of the Parts of the Body; or as between the Parts of it and the Whole of it; which should also symbolize a correspondingly more Radical Distribution of Human Society. The distinction here alluded to is as between 1. The Limbs or Branches of the Body; 2. The Trunk or Central and Simple Integration of the Substance of the Body ; and 3. The Entirety or Compound Wholeness, or Composite Integrality of the Body, as constituted of the Limbs (including the Head) and the Trunk, conjointly. Analogically, as will be seen by further inspection of the Diagram, the Limbs in their Divergency or Branchiness symbolize the Principle of Divergent Individuality in Society. The Trunk in its Collective Unity symbolizes in turn the Opposite Principle of Mutuality, Collectivity, Sociability, or Convergent Individuality. The different aspects or modes of combining these two Grand Constitutive Principles of Society, will be stated further on. (t. 54, 56.)
48. Divergent Individuality, or the "Sovereignty of the Individual," as the Basis of Social Order, and consequently as the Fundamental Principle of Sociology, is distinctively and pre-eminently the doctrine of Josiah Warren of Indiana, and as derived from him has been elaborated by myself in a work entitled the "Science of Society." It has been recently exhibited in a less fundamental and exact form, but more popularly, by John Stuart Mill, in a work entitled " Mill on Liberty." It is the doctrine of the least possible amount of Intervention Governmentally, and by Social Restrictions
through Public Opinion even ; and of the development of the Individual Man into a Law unto himself; his action limited only by the ethical inhibition of aggression or encroachment; through the Intellectual Perception of the Abstract Principles of Equity and Right; which it is the object of this system to teach and to enforce, as the highest dictates of an enlightened self-interest,-so that ultimately Coercive Government shall become comparatively unnecessary. This idea predominates also in the writings of Herbert Spencer, and is made the basis of a distinct statement by him of one of his differences from Comte. It is this doctrine which is illustrated symbolically by the Divergency of the Limbs or Members of the Body. We instinctively speak of Individuals as Members of Society. The free development and use of the Limbs is truly the Basis, but it is not the Top, nor yet the Centre, of the true Autonomy of the wohole Body. Mr. Warren indeed admits the Counterprinciple of Leadership or "Individuality of Lead," or what Fourier would denominate Social Pivots, but he makes so little of it in the comparison with the Divergent or liberating operation of Individuality, that his name may well be put as the representative "par excellence," of this profoundly Radical Principle of Socialism.
49. Comte, on the other hand, with no attempt even at any adequate discrimination, leans, by his natural affinities, wholly to the opposite extreme. He explicitly denies Rights to the Individual in Society, altogether. He affirms that Society alone has Rights, and that the Individual has Duties to perform, only. (1).
50. Still, this one statement of his views would not do full justice to Comte. He believes that the safety and protection of the Individual are sufficiently provided for by the system of guarantees which he has, so to speak, devised in his Synthesis of Society, or System of Social Construction. He even admits

[^10]the usefulness of the Critical or Divergent Principle in the great Crises or Transitions of Society, for the purpose of breaking up the incrustations of an old and imperfect Synthesis ; in other words, for revolutionary periods. He nowhere recognizes it, however, as one of the Ever-Present Essential and Vitalizing Principles of Society, to be guarded and cherished, as we guard and cherish the Existence and the Freedom of our Limbs, - as something indeed never to be sacrificed except in the last extremity, and as a pis aller for the mutilated preservation of the Body itself.
51. This important point has been so loosely considered by Comte; it is so little the Tonic or Key-Note of his system, while the opposite Principle, The Collective Interests of Hu manity, and the absolute devotion of the Individual to them, is insisted upon in such immense preponderance, that I have chosen his name to stand representatively for this CounterPrinciple of Convergent Individuality, -which is, the Mutual-ity-Aspect or the Collectivity or "Sociability" of Society, as against its Individuality. The Analogue of this Principle in the Individual Body is the Trunk or Main-Stem of the Body, -the Torso, as against the Limbs.
52. Divergent Individuality is the Principle of Freedom and Progress, tending to Democracy, and ultimating in the Sovereignty of the Individual ; Convergent Individuality is the Principle of Order or Conservatism, and hence of Immobility or Rest. While therefore the Sovereignty of the Individual is claimed by Warren as the Principle of Order, it is so, not direclly, nor in its own nature, but as a Reaction and as a Basis, and because the Ultimate and Harmonious Order of Society must rest precisely upon this Basis of Individual Freedom, or must in other words be compatible with it. Louis Napoleon has uttered the great phrase, "Contented Nationalities as the basis of National Harmony." The greater conception still is Contented Individualities as the basis of the Order and Harmony of Society.
53. Comte, on the contrary, claims, at the opposite extreme, that a Constituted and even a Repressive Order is the Conditron of Progress. It is so, in turn, only in a secondary sense, less radical than that in which a Free Divergent Individuality conduces to Progress. He justly affirms that "Progress is merely the Development of Order ;" but the Order of Nature, by which she is effecting her Grand Universal Social Progressions, as indeed all other Progressions, is something larger than the Conventional and Established Order which this Philosopher would assign to her. This magical Order of Nature or of Providence is competent to embrace and to absorb, and to utilize the Utmost Scope of that Divergent Individuality which is the terror of "Conservative minds;" nay, even demands that utmost scope of Divergency and Freedom as the indispensable Condition and Ground of its own Being. This is no more than repeating what was said above of the Doctrine of Warren.
54. Fourier, differing again from both Warren and Comte, combines these two Opposing Principles implicitly, but not explicitly; that is to say, vaguely and somewhat unsatisfactorily. He proposes "to harmonize the Passions," by which he means all the Motor-Forces of the Soul, by his discovery of still other and in a sense higher Principles of Social Reconstruction and Harmony. These Principles are, especially, "Passional Attraction" and "Industrial Attraction." He therefore, so to speak, obliterates or blends and obscures the distinct idea of the Duties and that of the Rights of the Individual, under the concrete operation of those higher Sociological Principles. He trusts, in other words, to the influence of Charm, or to the delight of life under harmonious conditions, which shall make us forget whether we serve or are served in the supreme pleasure of Doing. The Analogue for this is, in a sense, the Totality of the Body,-Trunk and Limbs; but this not with any complete distinctification of those parts, but rather the Body as recognized through a flowing out-
line, as of the draped statue or the fashionable lady in full toilette.
55. Warren, in respect to the series of Sociological Principles here discriminated, is Scientoid, Analytical, or Disintegrating, and truly Radical. Comte is Philosophoid, $N \alpha$ turoid, Synstatic, and only Pseudo-Reconstructive. His highest ideal of the Societary conditions of the Future is little more than a revivification of the old Catholic Church and of the Feudal System of the Middle Ages; with the men of Science as the new Priesthood; the Bankers and Industrial Chiefs engaged in the Organization of Industry and the protection of the poor, in the place of the Barons and Kings ; and the ideal Entity called Society, or "le Grand Etre" (the Great Being)-despite of his horror of Metaphysical Entities-as the object of worship, in the place of the God of Theology. Fourier is Artoid, Composite, Synthetic, and profoundly Recon-structive,-pre-eminently Radical and pre-eminently Conser-vative,-but without positive demonstrations, confused in method, and fantastical in manner; the brilliant but shimmering incipiency of the Grand Socio-Scientific Revelation of the Future.
56. Social Integralism is the Theoretical, and PantarchIsm the Practical Co-ordination, Combination and Co-operation of a true Social Organization;-the Reconciliation of all Opposites ; the Integration of all Partialisms and Extremes. Pushing Individualism to its Ultimates along with Warren, but only as a Basis, they accept and magnify along with Comte the doctrine of Leadership or Social Pirots,-the true Aristocracy of Talent, Goodness and Power for the Accomplishment of Good, -as an essential condition of Society at large, and of every practical undertaking which is to embody any considerable number of men-blending these Antagonist Principles into Harmony, by the interrention of the Fourieristic Principle of Charm. In other words, they integrate and co-ordinate the Individualism of Warren, the Subordina-
tion and Social Devotedness of Comte, and the Attractional Theory of Fourier. They go at the same time back of all these, and subsume the Great Religious Sentiment, the Spiritual Aspirations and Faith, and the profound Intuitional Experiences of the Race, in all the Past.
57. Social Integralism purposes, in addition, "to furnish, in full, the Philosophy of History; to give the significance of all the Doctrines, Rites and Sectarian Peculiarities, in the Religious World ; to reconcile and converge all Religions and Sects in the bosom of a Higher Social and Religious Unity, through the mediation of a Scienta-Philosophic Revelation of the Law of God existing in all Being, and tending ever to the final and satisfactory "Restitution of all Things." It will do the same for all governmental Diversities, and the Practical Incoherencies, in all senses, of the Collective and the Individual Life.
58. The new Science or Philosophy,-in whichsoever aspect it is regarded,-does not, however, profess even, as mere Science or Philosophy, to do the work of the Heart, nor to dispense with the instrumentalities of Religious Culture. It is preeminently the work of the Head in the service of the Heart; but that Service in the highest of the forms which it assumes is specifically one of Governing or Direction over the Sentiment, as well as over the Action or Conduct of the Individual, and especially of Society.
c. 1-3.

Commentary, t. $s$ s. 1. It is the characteristic or Key-Note of the Positive Politics of Comte, that the Heart rules or should rule the Head. This supposed Principle of True Social Order is stated very strongly by him, as follows: "The Intellect is not destined to reign, but to serve; when it aspires to govern, it enters into the service of the Personality, instead of seconding the purposes of Sociability, without being able in any manner to escape from the service of some one of the passions. In fact, the real governing function demands above all things Force, and the Reason has never anything to offer but Light: the Impulsion must come from elsewhere." (1)
2. Universology and Integralism just as distinctly affirm the Opposite Prin-

[^11]59. Universology is again competent to descend more deeply into the Arcana of Being, and to penetrate and disperse all Mystery; except the Mystery of Being itself. It proposes to carry the Methods of Exact Science into the Realms of Spiritual Phenomena, and to expose the whole Arena of Mythical Perception to the clear Sunlight of the Intellectual Understanding. I have placed the name of Swedenborg as the most leading of my predecessors among the representatives of this department of Knowledge. Swedenborg is still, notwithstanding all that the modern Spiritualists or Spiritists have done, the grand Coryphæus of Mysteriology and Symbolology. He has intuited obscurely the knowledge of the whole field, and has so furnished, in part, the Naturoid Stage of this Method of Investigation. He possessed vaguely that whole Doctrine of "Correspondences," or "Universal Analogy," which, when scientifically discovered, is Universology itself; although under this latter denomination,-Universal Analogy-Fourier has carried the Intuitional Phase of this discovery an immense step beyond Swedenborg, especially in its applications to Sociological Science.
60. The followers of Swedenborg, or the acceptors, as they denominate themselves, of his doctrine, and other high religionists, would concur in objecting to the surrendering of the name
ciple, namely, that all the faculties of Man individually, and of Human Society, should be, and are destined to become, specifically submitted to the government of the Reason; and that Force and Impulsions, instead of Governors, are the Subject-Matter or the living Reality of Being demanding to be governed.
3. The Hand of the Steersman on the Heln, (Fr. Gouvernail, Lat. Gubernaculum, a Helw, whence comes the word Government), practically, it is true, governs the Ship, (temporarily and materially); but the Hand of the Steersman moves in Subordination to the View or Sight, and to the accompanying word of command of the Pilot, who is the true Spirito-Ideal Governor of the Ship's course-so that the Mere Light is paramount over the Actual Force, even when this last is engaged in governing,-the Legislative paramount over the Executive Department. The Eye is higher in position and more truly directional than the Heart or the Hand. This important subject will undergo a more elaborate discussion in a subsequent work.
"Spiritualists" to those who have appropriated it in these more modern times ; and here more generally in America; of whom Andrew Jackson Davis and Judge Edmonds may perhaps be taken as representative men. These they call Spiritists, not for the purpose, or certainly not alone for the purpose of discrediting them, but for the purpose of marking an important distinction ; and since this same class of thinkers and believers in France,-"Modern Spiritualists"-hare roluntarily chosen the name Spiritiste, and not Spiritualiste, I have elected to follow the Swedenborgians in this particular. The difference between these two classes of believers is worldwide and important for all the purposes of Philosophy. The Spiritists hold with great uniformity that Spirit, as they understand and mean it, however refined, is only an exceedingly attenuated form of Matter. It is Etheria as distinguished from Materia. This doctrine is therefore the Spiritual Side or Aspect of Materialism. What they are discovering and investigating is an immense field in the larger domain of Truth now about to be annexed to the possessions of Positive Science, but it is still quite different in kind from, and should not be confounded with, a true Transcendental Spiritualism-although it tends to terminate in that, or is, to speak technically, tendentially correspondential with it. c. 1-4.

Commentary, t. 60. 1. For myself certainly, by the introduction of these two terms I do not desire to be understood as pronouncing by so doing, through any implication of the words used, upon the superior truth or greater excellence of one form of doctrine over another, but simply to avail myself of the facilities of language to save an important distinction of ideas; nor do I assign to any one an exclusive position in either rank.
2. By Spiritist I wish to designate one who belieres in the existence and communication of Spirits mainly through the testimony of "Phrsical Manifestations," or even of semi-intellectual and ideal risions, but who tends to assign to the Spirit-World an actual locality in Space, and so gencrally to materialize his conceptions of the Subject.
3. By Spiritualist I mean, on the contrary, one who, belicring in the Spiritlife, does so mainly through realizing it interiorly; by influx and faith affecting the life religiously ; as a world of pure thought and affectional or emotional experiences without much requiring or considering the testimony of Physical
61. The true Spiritualism, on the other hand, in respect to which Swedenborg is to be classed with the High Religionists and Orthodox Theologians, is a real Supernaturalism, and is the opposite or antithesis, therefore, of Spiritism. According to Swedenborg, this Mundane Universe is merely a coarser shell or outgrowth from a world of pure Spiritual Being, which is so distinct in kind from all that we call Matter, that it is not even contained in Time and Space, but absolutely transcends them both,-although there is in it, by correspondence, a certain appearance of Time and Space, the Time-phenomena being Thoughts, and the Space-phenomena being Affections. This Mundane World is then a world of Ultimates, and not of Origins. According to the logic of this distinction, the very granite rock, the Basis of our Materiality, is only a consolidation of Spiritual Entities or Forces-Thoughts, Ideas, Feelings. Accordingly Swedenborg boldly affirms that Love and Wisdom, the aggregations of Affections and Thoughts, are real Substances.
62. Extravagant and mystical as this last statement may seem at first to the mere Materialist in Philosophy, or to the Materialistic Scientist, it is indubitable that the recent progress of Scientific speculation, in the most conservative sections even of the Scientific World, is markedly and rapidly tending to similar conclusions. One has only to read some one of the more recent Scientific Collections, take for example "The Cor-

Manifestations: and who takes, or attempts to take, his conception of the Subject out of the Domain of Time and Space, and so, generally, to "spiritualize," instead of materializing the whole idea of the Subject.
4. Within the ranks of the "Modern Spiritualists," or (Fr.) "Spiritistes," I know many whom I rank habitually in my thought as Spiritualists, and others whom I rank as Spiritists; while I recognize in many a strong tendency to unite the two forms of doctrine and mental state, more or less harmoniously blending them with each other. Each individual is free to the adoption of either term as designating his own perception of himself, and will, I hope, be thankful for the help which the lingual discrimination will offer him. The Ner Language will afford infinitely more numerous and subtle discriminations for subdivisions of the same domain.
relation and Conservation of Forces; A series of Expositions, by Prof. Gove, Prof. Helmholtz, Dr. Mayer, Dr. Faraday, Prof. Liebig and Dr. Carpenter," to be struck by the immense strides which these leaders in Science are making towards what I may denominate the Spiritual Constitution of Matter. This is, of course, in their minds, in the first instance, in the form of the admission of a Materioid Etherial Substance, finer or more subtle than that which has been heretofore dealt with in Science, and which latter we must hereafter discriminate as the First Form, or the Gross Form of Matter.
63. Professor Joseph Henry, Secretary of the Smithsonian Institution, at Washington, has recently admitted what we must now denominate the Second Form of matter, the Etherial, into a Scientific Classification. His words are: "Matter is found in three states or consistencies-Solid, Liquid, and Aeriform or Gaseous; and to these may reasonably be added a fourth : the Etherial." (1). Professor Silas L. Loomis, also of Washington, is elaborating a profound and original Scientific Exposition of the nature and laws of "Etheria" or "the Second Form of Matter." The world is already familiar with the Odic Force of Reichenbach, which Faraday, it is said, has admitted may have relations with his own discovery of DiaMagnetism.
64. The Scientists do not as yet, for the most part, consciously mean by these new attributions, or theories of matter, all even that the Spiritists mean by Spirit-Matter ; but the line of difference is difficult to be drawn or preserved, and, as I have said, the Spiritists tend in turn to take the ground of the true Spiritualists or Supernaturalists, who tend in their turn to become more materialistic in their expositions of Supernaturalism. Take, for illustration of this latter statement, the Cosmology of Hickok, who from the highest pinnacle of Ortho-

[^12]doxy, traces down the Will of God into the detailed mechanism of the External World.
65. Professor Hickok goes, indeed, the additional step beyond the Etherialists, of boldly discarding the idea of Matter as such, and resolves all appearances of Matter into nothing else than the Standing-Against-Each-Other of Opposite Forces. These forces are then retraced to their Spiritual Sources in the Will of God, -while ultimated as Matter.
66. Not the least surprising of the manifestations of a new Spiritualizing tendency in the Science and Philosophy of the Day, -starting from the Materialism allied with Positive Sci-ence-is the recent mork of that prominent Positirist (Echosophist) J. Stuart Mill, "On the Philosophy of Sir William Hamilton." Deriving his reasoning from the farorite Echosophic Aphorism or Formula, the Relativity of all Knowledge, he is conducted substantially to the Extremest Subjective Idealism of Berkeley or Fichte, which means also the Spiritual Constitution of Matter. He resolves all that we know of Matter into the Aggregate of "Our Sensations, as mental States, together with the Permanent Possibility of receiving Impressions."
67. Thus, either as God, or Man, or Spirits, or as diffused Spirit, the purport of true Spiritualism is to resolve all Things into Supernaturalism, as that of Materialism is to resolve all things into Matter ; and of these both to change places. It is the Contest of the Realists and the Nominalists, or of Idealism anत Sensationalism, over again upon a higher and a broader plane.
68. The tendency of these Doctrines, Naturalism and Supernaturalism, each to orerlap the other, and so to speak radically to change position, has been alluded to here, only; it will be resumed elsewhere. Universology accepts them both as Phases or Aspects merely of a Compound Truth, no single Exposition of which is or can be exhaustire. They are reciprocally related to, or Correlative Halves of, the one Totality of Being, or Body of Truth, the Natural and Essential

Counterparts of each other, as much so as the two sides of the body. This is equally true as the Practical or Relative Fact, and as the Law of Subdivisional Distribution, apart from the question, how, in ultimate Analysis, the Radical Ontological Question may seem to be decided. "In my father's House there are many Mansions." The Universe is that house. The Mansions are those numerous and seemingly Opposite and Irreconcilable Forms of Doctrine in which the Mind may legitimately rest as alike true, -in the Absolute. It is in the Relative only, and in the Undevelopment of our Knowledge prior to the discovery of any Unifying Law, that views which are different and opposed, are pronounced as necessarily for that reason,-one or the other of them-false. The two sides of the body are different and opposed, but both are alike true to the higher purpose, than that of their own sectarian pecu-liarity,-that, namely, of constituting the body.
69. The Absolute and the Relative are themselves again, in the light of Universology, no other than Opposite Aspécts of the One Compound Truth of Being-inexpugnably united with each other. These, however, are the higher problems of Universological Metaphysic, and not proper-except in the mere glance-to this preliminary sketch. c. 1.
70. It is proper, however, to affirm that Universology is competent to descend into the Utmost Minutiæ of Metaphysics, and to settle all the vexed questions of Abstruse Speculation by a Positive Method,-to settle at any rate the limits of what it is possible to determine by any Method which the human mind may be rationally supposed to possess. It promises to reconcile all the conflicting Schools, not by inducing any of them, necessarily, to abandon their favorite "stand-points," but by proving to them that the stand-points of all others are

Commentary, t. 69. 1. I employ the term inexpugnable in its strictly etymological meaning, litcrally: un-fight-out-able. It is a stronger word than inseparable, as suggesting the utmost exertion to separate, and that exertion as unavailing.
alike tenable; or, at least, that they are representative of Some Aspect of Truth, which, under some modification, needs to be represented ; and that the Integrality of Truth consists in this very variety of its Aspects within the Relational Unity of an All-Comprehensive and Ramifying Principle.
71. But farther on, and more important than all else, Universology tenders a Grand Rational Reconciliation, as partially stated above, to all the Religions and Sects, not alone of Christendom, but of the whole World. It decides that all are, in an important sense, founded in truth ; in other words, that the Basic Principle of every Form of Belief which has ever extensively commanded the human mind, is a Scientific truth and one of the Stones (or it may be one of the Apartments) in the Temple of the Living God.
72. It was only while seen as fragments in the rude stages of their preparation, apart from each other in the quarry and the wilderness, that they seemed uncomely, heterogeneous, and conflicting. The work of preparation completed, they are about to be brought together in a Sublime Edifice of Truth, so quietly and naturally, that it may with truth be said, that "no sound of the hammer was heard thereon." It will be the Millennium inaugurated through Science. The Stone which was rejected of the builders has become in a new sense the head of the corner.
73. The Sects, Religious, Political and Social, are the Phrenological Organs in the Head of Society or the Grand Man, and in their very oppositeness they constitute the Individuality of that Immense Being. When they shall mutually recognize this Reconciliatory Principle, a Friendly Co-operation in the presentation of the Great Composite Truth of All Organization will take the place of the shameful dissensions which now rend the Unity of Mankind. (c. t. 1123.)
74. It is not intended to be affirmed that all Systems and Dispensations are alike in dignity or rank. The Fetichism of Africa, for example, is not to be compared to the sublime
beauties of Christianity, in respect either to the Elevation or the Progressed Stage of the Ideas, or the System of life. There are in it, however, two varieties of Truth, the Truth of Adaptation to the Stage of the Development of the people who believe or have believed in it, and the Truth of the immanent presence of God,-Him "in whom we live, move, and have our being"-in all the Material Objects of which the Universe is Composed-not in a merely Pantheistic Sense ; but vitally, and as a fundamental Dogma of Theology. This is the lowest and consequently the Basic Truth of Religion. It was nevertheless necessary, in order to initiate the Progression of the human Mind to the comprehension of Higher and more Spiritual Truths, to wean its devotion from this Infantile Instinct of the Soul. Such is the solution of the long war waged with Idolatry in the History of "the Chosen People of God." But when the Spirituality of Man is sufficiently confirmed through a succession of Dispensations, it becomes safe to revert to, and heartily to accept, the earliest dawnings and all the intermediate suggestions of the many-sided system of Religious truth,-God's perpetual and unfolding Panorama of Revelation to Man.
75. Christianity has never claimed for itself in its primitive or existing form to be more than a transitional dispensation. c. 1 .
76. The Jewish Dispensation was, previous to Christ, and is still, byits own interpretations, alikeProvisional. With the Restoration of the Jews to the Holy Land,-in one sense a triumph of the Jewish Nationality, -the Jewish Nationality is destined, on the other hand, as their Scriptures are understood

Commentary t. \%5. 1. What is alluded to in the Text is the universal expectation, in the Church, of a Second Coming or a Final Coming of Christ, or a Permanent Institution, in some sense, of his Kingdom upon Earth, is a New and Distinctive Dispersation. The Pope, for example, as Hearl of the Church Universal, claims to be no more than the Vicegerent or Place-Holder for the True Head of the Church in waiting, until he shall arrive, and assume the personal exercise of his own functions.
by the most intelligent and progressive Jews, to be extinguished in the higher blending of all the Nationalities into one.
77. The Church must not then assume to dictate to God the mode in which a new Rerelation or Dispensation shall occur.
78. It is only possible here, again, to glance at the immense field of the Applications of the New Science to the Ultimate Solution of all Religious Affairs. Let the Religious world look to it, and see that they do not reject the Truth because it comes again "out of Nazareth," or in an unexpected guise. It is possible,-they should admit,-that they may not have understood, in adrance, all the Immensity of the Complexity and Consistency of the Development of God's Providence on Earth. "His ways are not as our mays, neither are his thoughts as our thoughts."
79. In respect to Systems of Gorernment and Political and Sócial Doctrines, Universology will effect the same work of Universal Reconclliation. It spans the whole gulf from the direst Democracy in the Sovereignty of the Individual, to the Apex of Absolutism in a Theocratic Despot of Society. It teaches, not vaguely, but with all the precision of Science, how to be wisely conservative, and at the same instant unlimitedly progressive. It is stupendously revolutionary, but without violence or injustice to any of the Institutions of the Present; while it subsumes, integrates and justifies all the Eventualities of the Past. It will convert Reactionists and Conserratives everywhere into more than all the enthusiasm of Radicals, and will recall Radicalism to the staunch defence of the Modified Rights of the statu quo. It will make of Morality a Positive Science, and will regulate beneficently everything from the Greatest Industry down to the minutest Affairs of the Common Life.

S0. It is thus that Social Integralism and Pantarchism find their complete Analogical illustration in the Totality of the Human Figure as indicated at the right hand side of the
last preceding Diagram (Dia. No. 2, t. 41) ; not, as with Fourier, in the likeness of the draped figure alone, but also in the Exact Outline of the Nude Body, and the rigorous exhibition of a true Anatomy-softened and slightly disguised merely, under the scientific perfection of the Sculptor's Art. So also Universology and Integralism have their Analogue in Man and the World, with their intermediating, surrounding, and permeating, Aerial or Spiritual Medium-in the Totality, in fine, of what is presented in this Typical Tableau of the Universe.
81. In the distribution of the Total Mundane Universe into Man and the World, Man occupies that upper half of the Tablean, which in the corresponding division of the Spiritual Cosmos is assigned to the Heavens, as standing above and resting upon the Hells. See the Typical Table of the Universe (Table 7, t. 40). In accordance with this analogy, the Total Hearens should be, in some symbolical sense, in the form of a Man. Let us hear Swedenborg upon this subject. The following extract will appropriately conduct us to the close of the present chapter :
82. "That Hearen, viewed collectively, is in form as One Man, is an Arcanum which is not yet known in the World; but it is well known in the Heavens; for the knowledge of this Arcanum, with the particular and most particular circumstances relating to it, is the chief article of the intelligence of the Angels ; since many other things depend upon it, which, without a knowledge of this as their common centre, could not possibly enter distinctly and clearly into their ideas. As they know that all the Heavens, together with their Societies, are in form as One Man, they also call Hearen the Grand and Divine Man. They call it divine, because the Divine Sphere of the Lord constitutes Heaven, as shown abore." (1).

## c. 1 .

Commentary t. 82. 1. In all Extracted Matter introduced into my Universological Writings I shall take the same liberties typically as if they were

[^13]83. By passing in the Natural or Fistorical or Material Order, upward and imward, from the World to Man, and to the Inmost Mental and Metaphysical Domain of Research, we exhaust the Possibilities in that Drift of Direction, and find ourselres, often unconsciousty, turned Outrard again, to the External and Objective World, as the Trial-Field for the Application of our Speculations; or, Contrariwise,-In passing by the Logical or Ideal or Spiritual Order, downward and outucard, into Nature, we analyze and refine upon Matter until, by a similar natural Transition or Revolution, we find ourselves brought back to Spiritual Considerations, or to the purely ideal Constitution of Natter. This Radical Change of Direction results from carrying any Drift of Speculation out to its Ultimates ;-as, if we were traversing a Stick, in thought, until we arrive at one of its ends, we must rererse the direction, if we would continue to pursue the ideal examination of it. This I find to be an important Principle of Unirersal Science, haring thousands of Applications, and I formulize it, therefore, for Reference, as :

Ternitial Contersion into Opposites.
84. It is by this Principle that Extremists in any opinion tend naturally to go orer to the Opposite Extreme; and this at both Poles of the Difference, so that they often pass each other, and exchange positions. By this means Individual Opinions are constantly interworen into the texture of Universal Opinion, and that Absolute Divergence which would otherwise ensue, is providentially prevented. Not only is there Individuality in Different Minds, but there is Individuality also in the States of the Same Mind, and of each Mind, from time to time. It is not, however, Opinions only, but every
my own. In respect to Capitals, Italics, etc., the authors quoted from will not therefore be responsible. The reason for this course is that it is frequently the purpose with me to bring out into prominence ideas which were merely incidental, or of no more than of the ordinary palue in the minds of the original writers.

Varieizy of Being, which is under certain conditions to be gradully determined, subject to this Law ; thus by persistently traveling to the West we find ourselves landed in the Extreme East. It will be shown elsewhere that Atheism, the Extreme of Scepticism, logically tends to conduct, by a Terninal Conversion into Opposites, to a New Order of the Sublimest Theological Conceptions; and that the Excessive Veneration of an Extreme Piety, tends, contrariwise, by the same Principle, to become a Virtual Atheism. It is then through this gate that mankind may pass ultimately to the Reconcillative Harmony of Ideas. The Reversal or Conversion may be Single, or relate to one end of the stick only, or it may be Double, relating to both ends, the two Drifts crossing and leading to a Mutual change of Position. Hence there is both Simple and Compound Terminal Conversion into Opposites.

c. 1.

Commentary t. 84. 1. It is a familiar idea in the churches that Converts from Inficlelity make the best Christians. It is equally true, on the contrary, that to be the most intelligent Infidel it is necessary to have passed through the deepest religious experiences. It will only be when the Leaders of Humanity, and, in part, their followers, shall have completed the entire Traverse of Convictions and Mental Experiences; -and this in both Drifts of Direction, interlocking with and modulating each other in a third and new Stage of Complex and discriminating Faith-and-Knooledge,-that a sufficient Basis of Mutual Toleration and Acceptance will have been obtained, upon which the New Dispensation, born of the Ripeness of the Ages, can display its Composite and Transcendent Harmonies.

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85. Having, in the preceding chapter, taken a general or as it were a bird's eye view of the Grand Typical Table (No. 7, t. 40), and of the Primitive or Typical Tableau (Dia. No. 2, t. 41), of the Universe, I shall begin more formally in the present chapter, at the botlom of the Table, and ascend step by step to the top of it, in a more particular and detailed exposition, to continue in subsequent chapters. (c. 1, t. 14).
86. But before proceeding with the more orderly treatment of the subject, let us revert to the Basic Distribution of the Universe, into Matter, Mind and Movement, and illustrate it by its appropriate Diagram. Matter. is conceived of instinctively as External and Gross, and Mind as Internal and Fine. When we speak of our Exterior or Exteriors, we mean our Bodily and Material Proportions; while by our Interiors we mean the Mrnd, Spirit, Soul, etc. Matter is appropriately symbolized, therefore, by the Thick or Brazony portion of any Object, as of a Globe for instance, and Mind by its Centre of Gravity, or of Extension, and the Diverging Lines from that Centre, especially the Diametrids or Diametrits which, while centering it, are mean or mid-way of it, and measure, regulate and adjust it. The Whole Object, the Globe, for instance, is then situated in Space ; and it is the Changes of its Position, indicated by the Line of its Movement, in whatever Direction, which are illustrative of Movement generally. These changes are contained in Thine, as the Track or Course or Current in which the Movement occurs. This Primitive, Fundamental and Important Symbolism is exhibited in the following Diagram :


The comparison of this Diagram with the Geometrized EggFigure upon the Title Page will suggest a resemblance. The subject will be resumed and more fully expanded in the Fifth and Sixth Chapters in treating of the Symbolism of Form.

## a. 1-3.

87. At the very bottom of the Table (No. 7, t. 40) is placed the Old Hindoo Philosophy, which is characterized as Abso-

Amotation t. 86. 1. The Etymologies are here very important, as corroborative of the Srmbolism and of the Philosophy. Matter (Lat. Mat-cries) is related, on the one hand, to mass (Lat. mas-sa for mat-sa, from Gr. masso for mat-to, I beat, Sp. mat-ar, to beat or knock down, whence то KILL) and to the English rerb то мnit, which is to beat solid, or to make firm, or close. Hence Solidity or Density and Deadncss are implied in the meaning of Matter. On the other hand, this word is related to Moth-er and Matrix (Lat. mat-er, San. mâtâ, mother), as that which is external $t o$, and which produces from within. The whole idea is then that of an External, Solidified, Dead or Inert Mass, which covers or envelops-and hence may de-
velop or produce from within itself some finer product.
2. Mind (Lat. Mens, Mentis, San. Mantis, from Man, тo Thins, whence the English word Max, the Thinker), is, on the contrary, related 1. to Mear and Meav-ing, and thence to Mid-dle, (by dropping the $n$, as happens in the Greek Mct-is, Wisdon, and Med-omai, I InTEND, from maino, I AM ANGRY or MAD -give rein to the mind) ; 2. to measure (Gr. Met-ron, Lat. Mens-ura, from Meteor, TO MEASURE) ; and 3. to Adjustment, as in Means, Mediation, Mediator, also (inversely) MED-dler.
3. Movenent goes back to the Sanscrit Mê, to chavge places, and Mâyatai, He exchavges, whence Lat. mutare, to chatge, and the English con-mute, mOTABLE, etc.
lutoid and Pneumato-Universal. The Analogue of this Immense System of Extravagant and Shoreless Speculation, -which has in it, nevertheless, the profoundest of Absolute Truths and the utmost stretch of the human imagination,-is found in the conception of Pure Space, unfilled by any Objects or Contents whatsoever, and Pure Time unfilled by any Events. This Shoreless Space and Endless Time are then the Joint Continent or Matrix waiting to be infilled,-as by an immense fœtus,-by the Actual Objective Being of the Universe. They are the Conjoint Negative Ground, of which the Substantive or Objective Universe is the Unit of Positive Contents. It is this Negative Expanse and Extense of Non-Being, as the Ideal Receptacle of Being, which is here assigned analogically to the Hindoo Philosophy as the Arena of its stupendous vagaries. Where better could the infantile but intuitive reasoning faculty of Man begin its immense curriculum oi philosophical exercitation?
88. This almost impossible conception, when reached-let us confine ourselves for the present to the Spacic Half of itconfounds all Relative Conceptions, and either wipes out all Discrimination whatsoever ; or it converts every natural Discrimination of Being into every other,-if, for this purpose, we readmit the slightest modicum of the idea of Movement and Time. In Space, so conceived of, there would be no $U_{p}$ and no Dowon, no Right-hand and no Left, nothing Frontwise nor Back; no South and no North, no East and no West ; no Within nor Without;-Or, contrariwise, Up would be at the same time Dowon; Right would be Left; Back, Forth; North, South; East, West; and the Within, the Without. The Whole, collectively, is a Negative Chaos of Pure Ideals ; not even the Positive Chaos of the Greeks. This last was composed of the Realities of Existence in a similar confusion.
89. The Absoluto-Absolute of the great body of all Philosophy, -and the Hindoos were the first to go there,-lies still
back of this Double Domain of Chaos, at the line or point where they again lose their distinctiveness, and sink into the Abyss of Primal Indiscrimination which admits of no Difference. Here, according to the Hindoo Philosophy, all things began and thither all things tend ultimately to revert. This is then Annihilation, but no more Annihilation than Positive Being. It is that micban which the Hindoo Philosophers and Religionists have elevated, by a still higher strain of the effort at diffusive abstraction, into the Supreme Heaven. Personified, it is Brahm who is revealed through Om (or Aum), the Logos of their System of Theology and Philosophy, whose name even is too solemn or sacred to be ever pronounced. Brahma is again the same Idea with the addition of the Element of Promotive Movement or Change-the back-lying Creative Energy of God, or the God representative of this tendency to Change. He then Creates through the Mediation of Om-"Progress Subordinated to Order," a Principle recently formulized by Comte in those terms. (c. 1-3.) The following inspirational and mystical poem by Ralph Waldo Emerson is a remarkable

Commentary t. 89.1."The 'Word' by which Brahma created the World is Om (Aum). See Ton Bohlen, i. p. 159 ss . 212. In the System of Zoroaster, Honover is represented as the Word by which the World was created (Duncker, Logosl. Just. Mart. Gött. 1847), the Most Immediate Revelation of the God Ormuzd; see Klenker, 1. c. and Stuhr, i. p. 370, 371 [Burton, l. c. Lect. ii. p. 14-48]," (1). Back of the Triad, Brahma, Vishnu and Sira, (Creator, Administrator and Destroyer), and back of Om, is Brahm, the Supreme God, in Absolute Repose, without change or any known attributes, the Absoluto-Absolute Conception, like that Aspect of the God of the Scriptures in which He is "witkout variableness or shadow of turning." Brahm must not therefore be confounded with Brahma, the Head of the Triad. It is this Conception, rather, which from the Absolutist Standing-point (Naturoid) is the First and Last Word of Philosophy. The Conception embodied in Brahma is so from the Practical Point of View (Artoid), and that embodied in Om (the Logos) is so again Mediatorially (Absolute Idealism-Hegel), or from the Scientoid or Logical Standingpoint. This is Allied with Space and with Geometrical Limitation, as the Practical or Moving Conception is with Time, and the Simple Absolute (Naturoid) with the Denial of both Space and Time. (c. 1-10, t. 125.)

[^14]epitome of this first and last word of the speculative reasonings of Man, which as a Principle of Philosophy I shall characterize as

## Convertible Identity,

meaning that All Things are All Things else ; or that Every Thing is in its very Ground one and the same.

> BRAHMA.-R. W. Emerson. If the Red Slayer think he slays, Or if the Slain think he is slain, They know not well the subtle ways I keep and pass and turn again.
> Far or forgot to me is near, Sunlight and Shadow are the same, The vanished Gods to me appear, And one to me are shame and fame.
> They reckon ill who leave me out, When me they fly, I am the wings; I am the doubter and the doubt, And I the Hymn the Brahmin sings.
> The strong Gods pine for my abode, And pine in vain the sacred Seven, But thou, meek lover of the Good, Find me, and turn thy back on Heaven.
2. In characterizing, in this manner, the Hindoo Philosophy by the idea of General Negativeness corresponding with the broad expanse of Pure Space, the fact is not overlooked that there is vastly more than this in that great preliminary excursus through the Philosophical Domain. All the grand Schools of Philosophy, which have hitherto appeared in the world, had their Cartoon Sketches completed, so to speak, within the immense body of the Hindoo Metaphysics. Their Philosophical Doctrines are indeed regularly divided into 1. Sensualism ; 2. Idealism ; 3. Mysticism, and 4. Eclecticism. (1).
3. What is meant is, that the System is nevertheless basically characterized by the Representative Idea stated in the Text, and so in the case of the Greek Philosophy and the other Philosoplies referred to in the following paragraphs. Every System of Philosophy, inasmuch as Philosophy deals with the Universe, covers the whole field in a sense, so that all Systems overlap each other. The only characterizations which they therefore admit of, or which indeed the different Aspects and Domains of the Univcrse itself admit of, relate to the Standing-Points of the Observers, the Beginning-Points of their Courses of Inrestigation, and the Mere Preponderance of Governing Ideas-the Clefs or KeyNotes of the different Systems respectively.
90. The Greeks began in the Positive Chaos, and arose thence into the conception of Distinct Elements of Being. From the Marriage of Chaos (Positive) with Night-as the Negative Chaos (substituted for the broader Space-like conception of the Hindoos)-was born Destiny or Fate, that is to say, the Limitation of Lavo. The clearer-minded modern German Metaphysician is but saying the same thing when he informs us that the fundamental Group of Categories of Existence is compounded of 1. Reality ; 2. Negation ; 3. Limitation -which is again the Something, the Nothing, and the Ideal Relationship of Unity in Difference,-Relational Unity,-between them. c. 1-2.
91. The Greek Mind, taking a great step towards serious thought and practical knowing, began to seek for the origins of all things in what they saw and felt about them. They discriminated as the Elements of Being, Earti ; Air; Fire; and Water. Different schools of Philosophy sprang up accordingly as one or the other of these Elements was thought by different orders of mind to be more fundamental than the others. Higher up in the range of Thinking, the Greek Atom-

Commentary t. 90. 1. The Chinese Primitive Philosophy expounded by Confucius may be regarded as the Primitire Philosophy of the Line or Limit, intersening between the Nothing and the Something (Space and its Material Contents)-giving for the Straight Line an ideal of Right, and to the Crooked Line the idea of TFrong or Evil.
2. "The Uk-king, by Du Halde termed Y-king, contains the Trigrams or enigmatic lines of Fo-hi, said to be first Emperor of China. These consist of three lines, varied by one or more of them being broken in the midst. Two of these Trigrams, forming six lines, are, in this work, placed in sisty-four difierent positions; in the first position, the two upper lines and the sixth are broken in two ; in the second, only the fifth line is broken; in the third position, the second, third, and sixth are broken; and in the fourth, the second and third only. After each position follows a short sentence, and then a comment by Confucius, affixing certain ideas to each of these positions. It is highly probable that these Trigrams preceded the inrention of the Chinese characters, and that they were the first attempt to express in writing ideas relative to heaven, earth, man, etc." (1).
(1) Marskman's Life of Confacius, p. xir.
ists anticipated the modern Theory of Dalton, and Pythagoras in like manner furnished the prophecy of Universology itself, in that Theory of Numbers which has puzzled the world from his day to this. Plato prefigured Swedenborg, and Aristotle was the legitimate progenitor of both Bacon and Kant.
92. But primitively and fundamentally the Greek development of Philosophy is characterized by its relation to the Four Elements just named. These were conceived of in a mixed way, partly as the Real Materials, which bear the names Earth; Air; Fire and Water respectively ; in which sense this Philosophy is the precursor of Modern Chemistry; and partly as Symbols or Mental Conceptions analogically related to these Materials ; in which sense it is the precursor of the whole range of Metaphysical Speculations from that day up to the great modern revolution effected in that domain by Emanuel Kant. Through another branching of the same genesis through Aristotle, Bacon, and the great modern scientific awakening, the Greeks are equally the progenitors of the Comtean Positivism, of the Science of Sociology, and of the grand promise, so far at least as Science and Philosophy are concerned, of a Reign of Order and Harmony in the Future.
93. This Greek development of Philosophy, with its Four Material Elements, as Principles, I denominate the Materioid Stage or Form of the Naturo-Metaphysic. Matter (whence the term Materioid), repeating Nature, this signifies really (except for the cacopiony of the repetition), The Naturism of Sub-Naturism, -in this Philosophical Domain. It is therefore very near down to the Logical beginning of things. c. 1-5.

Commentar? t. 23. 1. The Sub-Naturismus of the Universe of Thought and Being is the Metaphysical Domain. The Naturismus of this is the Phenomenismus or the Objective and Naturoid Perception of Things and Facts. It was therefore with a Treatise on Phenomenology that Hegel began the exposition of his Plilosophical System. This was the Natural Order. IIe afterwards brought forward Logic, or the Scientoid Aspect of Metaphysics, and gave to it the leading position. This was the Substitution of the Logrical Order in the place of the Natural ; and the Phenomenismus was then in part set aside,
94. Modern Chemistry and Criticism have discredited and discarded Earth, Air, Fịe and Water as Elements. The Chemists have substituted some Sixty or Seventy Elements, by exact Analysis of the Constitution of Matter, in their place; as, Oxygen, Iron, Sulphur, etc. Those Old Elements of the early Philosophers were not, it is true, Elements, in the
and in part blended with the more formal institution of "Nature," as a Department of Philosophy, which, together with "Mind," is properly the Compound Existence from the Unition of Phenomena and Law. This vacillation in Hegel has not been overlooked by Chalybaüs, who says: "Hegel had at first cherished the intention to exhibit in Phenomenology the first part of his system; had this been done, Logic would have formed the second, and the Philosophy of Nature and that of the Mind would have constituted together the third part. In that case Phenomenology would have an ascending, analytically regressive, tendency, i.e., one going back to the proper principle; Logic would, as at were, occupy the culminating point of the whole or be in the middle, while the last portion would, as that which Weisse and others term Real-Philosophy, have represented the Synthesis of the two former, and at the same time the reduction or return into the commencement of the first portion. But afterwards another arrangement of the system was chosen: Real-Philosophy was divided into two portions [the Physiology and Psychology of my Typical Table], the latter of which, the Phlosophy of the Mind, was made the reduction" [a conducting back after completing the circle] "into Logic. Evidently two kinds of fundamental views run here through each other, etc." (1).
2. Beside the Hindoo, Greek and Chinese Philosophies, there are several other aucient forms of Philosophy which would require to be characterized if the object here were to be exhaustive. The following statement must, however, suffice.
3. The Persian System, conneeted especially with the name of Zoroaster, has for its symbolism not Space and Matter and the Line or Limit between them, but Light and Darkness, or Day a id Night, personified as Ormuzd and Ahriman, or the Spirit of Good and the Spirit of Evil.
4. The Egyptian Philosophy, embodied in their religion, passes over from Space and the objects in Space, to the dominance of the idea of Time, and primarily of Past Time. Hence tradition and the authority of the past were sanctified in every particular. Superstitious veneration was the life of the nation as perpetuated by their Monumental Structures.
5. The Hebrew National Faith, "coming up out of Egypt," has for its symbol "The Future," as contrasted with "The Past," the Covenant with Abraham, the Promise of a Messiah, and the ultimate gathering in of all nations.
(1) Mistorical Development of Speculative Philosophy from Kant to Hegel, by Dr. H. M. Chalyba"s, Edinburgh Edition, p. 435.

Exact Analytical and Scientoid Sense. They could not fill the place, in the definite furthering of Knowledge, which these Chemical Elements fill. They are not, however, to remain obsolete and discredited. Universology recalls them upon the Stage, and will rehabilitate them as being exceedingly valuable Primary Generalizations of the Facts of Being. It is only necessary to examine the Typical Tableau of the Universe (Dia. No. 2, t. 41), to perceive how this is so. Earth appears there as the Basic Cosmical Substance-the Ground of being. The Air is the Type of Spiritual Substance. Converted into Breath, it is literally Spirit, in the lower or materioid sense of that term. The word Spirit is from the Latin Spirare, то breathe. Water as a measurer of the Common Level, which is the Limitative Foundation of Things, and as a Mirror or Reflector, is the Type of Mind, which is the Measurer, as it is the Reflector of the Universe. Water is also limpid and translucent, and when subjected to cold it becomes crystallinelike "a Sea of glass" (Rev. xv. 2). As the Ocean it is the bearer of Common Salt which is the Common Crystal,-the Universal Type of Crystals. Water is thus doubly associated with Reflection and Crystalline Clearness. It is repeated by the Head of the Man, mirror and measurer of the External World ; this in turn by the Brow, the Intellectual Head of the Head; this again, in decreasing Miniature and focal Clearness by the Eye, associated locally with the Brow ; and the Eye again is finally repeated by the "briny" tear ; in which the Water and the Salt find themselves reproduced and intimately associated. Cool-headedness and clear-headedness are the pre-eminently characteristic descriptions of Mind. All this is associated again with Luminosity or Ligirr ; the Light of the Eye, and the Light from Heaven affecting the Eye. c. 1 .

Commentrry t. 24. 1. The diverse and remote Analogues here crowded together in the Text, may seem suspicious and fanciful upon this first and incidental presentation. Subsequent and detailed exposition will remove that
95. Fire, the last of these Elements in the present naming, does not appear in the Tableau, and requires now to be especially noticed. The predominant property of Fire is Heat. The Heat within the body is the manifestation, and as it mere, the Source of the Life of the Man. This Calorification is affected in the Blood which centers at, and is represented by, the Heart. The Heart is thus associated with Heat and with Fire, as preponderantly as the Head, Brow and Eye are with Light ; or as Translucency and Refiection are with Water, Nature's Great Mirror or Reflector, and Leveling Agency. The Heart centers the Trunk. The Trunk is the Base or Grand Supporting Fabric of the whole Body, and is to the Head what the Earth is to the whole Body, and what the Cosmos is to Humanity or the total Rational Unirerse. Heat and Fire are again accordingly associated with the Central Forces and the Great Molten Interior of the Earth; and further out, or more Exteriorly, with the Sun, as the Focus (Lat. focus, a Fire-Place) of the Visible Universe.
96. In the Sun, Light and Heat appear as One, and both of them as the Attributes of this Great Central Fire,--and so in a Minor Sense of Fire generally; but the Light of the Sun is reflected, and so appears independently, from the Surface of Water, or of a Crystal, as the Diamond; or of any Mirror. The Moon is such a Mirror; hence the Moon is a Type of Light determinately and preponderantly, and so the SUx of Heat and of Fire. c. 1, 2.
impression, and show how objects and ideas, far remored from each other in appearance, are closely related in respect to the Principle which they symbolize.

Commentary t. 96. 1. The Moos a reflector, and by its stated return, a measurer; Mar the thinker, or he who reflects and weighs (ponders, Lat. pondo, то Wergri) and measures ; and Mind, the instrument by which he reflects, weighs, and measures; all hare etymologically the same origin. "Analyze any word you like, and rou will find that it expresses a general idea peculiar to the individual to which the name belongs. What is the meaning of Moon ?-the Measurer," etc. (1). "There is a third name for Man thich means simply The Thinker,

[^15]97. In our Typical Tableau of the Universe (No. 2, t. 41), the Head of the Man, repeating the Mirrored Surface of the Water, and in an especial Sense, the Eye with its Crystalline Lens and its Tear, are Nature's Hieroglyphics of Light ; and the Heart of the Man, the Focus of Life, is Nature's Hieroglyphic of Heat ;-Light representative of Water, as an Element, and Heat representative of Fire.
98. Between the Head and the Heart,-involving as it were, and yet connecting them both,-is the Apparatus of Breathing. This begins with the Nose, the Vestibule or Portico of the Head, and ends with the Lungs which surround and embrace the Heart. The Breath is the Spirit, and is representative of the Element Air.
99. The Torso of the Body, the Mass of the Trunk, then repeats, within the Figure of the Man, the whole Earthy Foundation of the Universe, or the World as such. This is the Cosmos within the Constituency of the Anthropos, and is, in a secondary sense, representative of the Element, Eartir.
100. It is of the nature of Correspondence that it echoes in this manner from Sphere to Sphere, continually repeating itself, so that while Man and the World are to each other as a Head and a Trunk respectively, yet the whole is again found repeated in Man collectively, and then in the Individual Human Body, by the Head and Trunk therein, and still more minutely within the Head itself phrenologically con-
and this, the true title of our race, still lives in the name of Man. Mâ in Sanscrit means to measure, from which you remember we had the name of Moon. Man, a derivative root" [San.] " means to think. From this we have the Sanscrit manu, originally thinlier ; then Man [Eng.]" (1).
2. The Latin mens, mind, and mensura, measure, and the English mean and meaning are again etymologically the same word in different stages of development. The idea is a smooth, level expanse, as mirror, reflector, and adjuster, interposed as a mean or middle object between the objects to be adjusted; -Things and Ideas; the External Phenomena and the Internal Representations.
sidered. It is in this repetitory sense, or, as it were, in a secondary echo, that the Torso repeats the World. c. 1.
101. This Echo of Analogies from Lower to Higher Attenuations, so that the same Principles are repeated within a smaller compass, which has then to be unfolded or magnified то EXHibir the occult Analogy, might be called, with reference to our Mental Process in discovering or observing them, an Evolution of Analogies. But with reference to what may be called the Prior Process of Nature, by which she has folded in the finer Analogy within the bosom of the larger one, it is an Involution. Choosing the latter view of the Subject, I formulize, and shall refer to this Order of Procedure from Including to Included Analogies, as itself a Principle, under the Head of

## Involution of Analogies.

The Counter-Proceeding from Higher to Lower Attenuations of Analogy, so that the Same Principles are repeated in wider and wider Arenas or Domains, will then have for its Formula, Evolution of Analogies. c. 1.

[^16]102. Earth, Air, Fire and Water are thus reinstated as the four Basic Material Elements of Being. The Intuitive Wisdom of the Ancients is thus triumphantly vindicated. Their discriminations have a wider reach, and a more allembracing Philosophical Significance than the more microscopic and exact, and in another sense far more important, discriminations of the Modern Chemists and Physicists.
103. It now clearly appears from what precedes that Heat and Light are intimately associated in the Nature and Constitution of Things, and in a most especial sense, with the Heart and the Head of the Individual Man, or of Collective Humanity, respectively.
104. But previously we have seen that the Heart is the Type of Sentiment or Affection, and that the Head is the Type of Knowledge or Intelligence.
105. Heat has therefore a direct or dominant analogy with Affection or Feeling, and Light with Intelligence or Wisdom. This is the profound Intuitional Perception of Swedenborg, which lies, it may be said, at the very basis of his whole system of Mystical Philosophy. For Sentiment, Affection or Feeling he employs the term "Love," giving to it this enlarged signification, as Fourier does to the term "Passions" the Motor-Forces of the Soul. Love and Wisdon are then the Correspondences or Analogues of Heat and Light. Or, more profoundly comprehended, Love and Wisdom Are, intrinsically, Spiritual Heat and Spiritual Light, respectively; and this Spiritual Heat and Light are the very Essence of the Divine Being, of God himself, manifesting themselves in the Divine Operation or Creative Proceeding. The Divine Lore and the Divine TI isdom, or, correspondentially, Heat and Light, are thus, according to Swedenborg, the absolute Origins of all Things. The immense consequences flowing from such premises have not been comprehended by the Philosophic or Scientific World, nor even by Theologians. The Doctrine and its Results have constituted a huge body of Mysticism, because the Pre-
mises themselves were not comprehended, and were not, in any proper Scientific Sense, established by Swedenborg himself. They were Intuitionally or Impressionally apprehended in his Mind, with the ragueness which is distinctive of that method of Knowing, and Dogmatically delivered in the abstrusest technicalities of the old Theologies. The profound body of scientific Truths and Suggestions, thus wrapped up and hid away from the inspection of Mankind at large, can only be brought into the clear light of exposition by the Principles and Method of Universology. c. 1-6.

Commentary t. 105. 1. The use of the mord Passions, to signify the whole Affectional Side of the Mind prompting to Action, is not usual with English mriters, and is often a stumbling block with beginners in the reading of Fourier, who fancy that the Passions must be necessarily something bad. I find, howerer, in Hume, in his "Essay on Commerce," the following expression: "Every thing in the world is purchased by labor, and our passions are the only causes of labor." This is precisely the Fourieristic meaning of the word Passions, and used in English long before Fourier's day.
2. With regard to Light as the Analogue of Intelligence, and Heat as the Analogue of Lore, Affection, or the Passions, let us listen to Swedenborg :
3. "The Light of Heaven being Dirine Truth, it is also Divine Wisdom and Intelligence; whence the same is meant by being elevated into the light of hearen, as by being elerated into intelligence and wisdom, and enlightened; whence the angels have light exactly in the same degree as they have intelligence and misdom." (1).
4. "Since in the Hearens Divine Truth is light, all truths whaterer, be they found where ther mar, whether within an angel or without him, whether within the hearens or without them, shine, or gire light. Truths without the heavens, however, do not shine like truths within them. Truths without the hearens gire a frigid light, like snow, that possesses no heat, because they do not derire their essence from good, as do truths within the hearens; wherefore also that frigid light, on the illapse of light from hearen, disappears, and, if there is eril beneath, is turned into clarkness. This I have often witnessed; with many other remarkable facts relating to shining truths; the mention of which I omit." (2).
5. "The Heat of Hearen, in its essence, is Lore. It proceeds from the Lord as a Sun ; and that this is the Divine Lore existing in the Lord, and proceeding from Him, has been shown in the previous Section. It hence is evident, that the heat of hearen is spiritual, as well as its light, being both from the same origin. There are two things which proceed from the Lord as a Sun,

[^17]106. The Hindoo Philosophic Mind had removed Matter, and taken Blank Space, symbolically speaking, for its Arena of Thought. The Greek Philosophical Mind assumed the Positive Aspect of Being, and began to discard the vagueness of boundless speculation. From these preliminary stages of Thought, we may proceed to the modern German development of Philosophy, which has been glanced at already, and thus continue to trace, after our method, the Process and the Law of Mental Evolution.
107. Kant, and before him Aristotle among the Greeks, not satisfied with proceeding by broad Generalizations of Obserration, attempted intellectually to file a more definite and detailed

Dirine Truth and Divine Good. Divine Truth is displared in the hearens as light; and Dirine Good as heat. Dirine Truth and Dirine Goodl are, however, so united, that they are not two, but one. Still, with the angels they are separated; there being some angels who receive Dirine Good more than Divine Truth, and others who receive Dirine Truth more than Dirine Good. They who receire more Divine Good are in the Lord's celestial kingdom ; and they who reccire more Divine Truth are in the Lord's spiritual kingdom. The most perfect angels are those that receive both in the same degree." (1).
6. "The Heat of Heaven, like its light, is everywhere various. It is different in the Celestial kingdom from what it is in the Spiritual kingdom; and also in every society of each. It not only differs in degree, but also in quality. It is more intense and pure in the Lord's celestial kingdom, because the angels there receive more Divine Good; it is less intense and pure in the Lord's spiritual kingdom, because the angels there receire more Divine Truth; and it differs, also, in every society, according to the state of reception in the inhabitants. There is also heat in the hells, but of an unclean nature. The heat in hearen is what is meant by sacred and heavenly fire ; and the heat of hell is what is meant by profane and infernal fire. By both is meant love; by hearenly fire, love to the Lord and love towards the neighbor, with every affection related to those loves; and by infernal fire, the lore of self and the love of the world, with erery concupiscence thereto related. That love is heat derived from a spiritual origin, is erident from the fact that there is increase of warmth according to increase of love; for a man is inflamed and grows hot, according to the quantity and quality of his love, and its burning nature is manifested when it is assaulted. It is on this account, also, that it is customary to use such expressions as 'being incensed,' 'growing hot,' 'burning,' 'boiling,' and 'taking fire,' when speaking either of the affections belonging to the love of good, or of the concupiscences belonging to the love of evil." (2).

[^18]Bill of the Categories of Being. Aristotle had contented himself with an Empirical attempt, simply searching about in his mind for as many such Elements as he could think of. This was the first effort at Ontology, or a Proper Science oí Being. Of these Categories, there were in number, Ten: Essence, Magnitude, Quality, Relation, the Where, the When, Position, Habit, Action, and Passion.
108. The peculiarity of Kant, on the other hand, was that he undertook to find a Law which should determine beforehand how many there should be of these Categories, and what precisely they were. By an examination of the Science of Logic which Aristotle had successfully founded, he discovered the clue to such a Law. There are a certain definite number of ways in which it is possible for the Human Mind to act in the processes of Reasoning. It can think of things in regard to their Quality, as good or bad; with reference to their Quantity, as one or more, with reference to their Relation, as one belonging to another; or one producing the other, and finally with reference to what Kant denominates their Modality, which is their Possibility and Impossibility, their Actuality and Non-Actuality, their Necessity and Accidence. These make four Groups of Categories, each containing Three, making Twelve Categories, exhibited, in tabular form, as follows :

| Quantity. | Quality. | Relation. | Modality. |
| :---: | :---: | :---: | :---: |
| Totality. | Reailty. | Substance And Inherence. | Possibility and Impossibility. |
| MultiplicITY. | Negation. | Cause and DePENDENCE. | Being and not Being |
| Unity. | Limitation. | Reciprocal | Necessity and |
|  |  | Action. | Accidence. |

109. It was the second group of these Categories, called Quality, which was virtually assumed by the German school of Metaphysicians as the fundamental group, and upon which
that immense subsequent elaboration of Thought excited by Kant, and proximately ended by Hegel, was almost wholly expended. This determined their procedure to be Philosophoid and Naturoid, and not Scientoid; because Quality is to Quantity, precisely what Substance is to Form, and Substance is to Nrature, precisely uhat Form is to Science. It is therefore the group of Categories involved in Quantitythe Metaphysics of Mathematics-which is allied with the Exactitudes of Science. It is this latter group, therefore, which determines the drift of Universology as Sciento-Philosophy, and the assumption of which, as a drift, carries over the derelopment of Philosophy from the Naturoid to the Scientoid Stage of that development, as indicated in the Typical Table of the Unirerse (No. 7. t. 40). We have first, however, to proceed with the further exposition of the German Form of Philosoplyy, based on the Categories of Quality.
110. The degree of Analytical Exactitude which Kant intro. duced into Philosophy as a whole was incleed Scientoid, in a broader and less definite sense. I have therefore characterized this whole German drift of Philosophy in my Typical Table, as the Scientoid Stage of the Naturo-Metaphysic. Kant regarded himself as having, by the introduction of this principle, done what Copernicus had done for the Theory of the External Universe. But Kant himself, in part, by making the whole of his scheme hinge on the Laws and Action of the Mind, and his followers, still farther, by taking the Philosophoid group of Categories as Basis, which were allied inwardly with Substance, and not outwardly with Form-and not, therefore, with Positive Science-rendered Philosophy more intensely subjective than before. Oken, Humboldt, and the School of Natural Philosophy allied with this System of Metaphysics, were the Exception, not the Rule.
111. Kant's understanding of the term Quality needs some explanation. He divides it, as shown above, into Negation, Reality, and Limitation, which are not so obviously sub-
divisions of Quality. But by Quality in this high Phiiosophical Sense is meant the abstract constituency of the Substance of Things, as this last is contrasted with Form. Form is here also employed in an equally elerated and enlarged sense, to mean not merely Figure or Shape, but the whole Domain of Mathematics and Logic, as Number, Figure and Order, or the Arrangement of Parts ; even the Forms or Categories of Thought itself. This is also, therefore, the grand Domain of Measurement. But Quality itself, as above defined, has its own less appreciable possibility of measurement, in the fact that it may be intense or feeble. Now the intensity of Quality to any degree which makes it to be felt or recognized by us at all is what we mean by Reality ; that is to say, it is Something. Its feebleness, on the other hand, to the vanishing degree, where we do not perceive it at all, is NegAtron ; that is to say, it is then, Nothirg. Finally, as all Being is, as it were, the mere Limit or Boundary between these tro Factors of Being, Reality and Negation, or Something and Nothing, Linitation is a third one of the Elements which enter into the conception of Quality-in other words, of Substance ; for the aggregate of Qualities centering upon an Ideal Entity, which groups them or holds them together as One, is a Substance. But the Oneness so achieved by inserting the Ideal Entity among the Qualities, which Entity is then something other than Quality, and may become Two or more by Division, or Repetition, carries us over, or refers us back, to the next Group of Categories, namely, rather, that of Quantity.
112. Kant also introduced another Grand Discrimination into Philosophy ; the most fundamental, in one sense, of all the metaphysical discriminations, namely, that between the Subject and the Object, or the Me and the Not-Me. This is in fact, when more concretely considered, the same discrimination which is placed at the opening of the present Work, as Man and the World. Individually and abstractly treated, the distinction belongs to Metaphysics ; collectively and con-
cretely, it is Sociological. It is then the basis of Comte's grand division of Sentiment into 1. Egoistic, and 2. Altruistic. Man is the Subject of the impressions made by the World upon the Mind, and if it is my own mind which I am considering, then it is the Mc. The World is the Source of those Impressions on the one hand, and the Object of our Inspection on the other. Under the same conditions, it is the Not-me. Comte has thus derived, again, his corresponding discriminations from Kant, and is thus still farther indebted to the Metaphysicians, whom he habitually depreciates.
113. Fichte, coinciding with the line of Thought of Berkeley, a previous English Philosopher, takes up the question of Subject and Object where Kant had left it, and inquires what proof we have of the existence of any Objective World, since the impressions we have of it in the Mind, or what Mill now denominates, "the permanent possibility of such impressions," are the whole, as it seems, of what we can directly know of it. He evolves the whole Universe logically out of the Ego or the Me. c. 1.
114. Schelling follows Fichte, and identifies the Subject and Object in a supposed common ground lying back of them both. Then comes Hegel. He fixes his attention so intensely upon the Limit between the Something and the Nothing, and the Limit between the Subject and the Object, and between

Commentary t. 11.3. 1. Destutt de Tracr, author of "Elémens d'Tliologie," was the Metaphysician of the French Sensational or Materialistic School of Philosophy, the followers of Condillac-as Cabanis, Garat, Volney, etc. Hence this School, by what Sir William Hamilton calls "a double blunder in Philosophy and Greek" (1), while beginning in Materialism acquired the name of Ideologists. This occurs, however, not by any blunder, but by the Natural Operation of the Principle formulized at the End of the Preceding Chapter, as Terminal Conversion into Opposites. They, and after them, and more specifically, now, Mr. Mill, passing from Physiology to Psychology, arrive at the End of a career, with some difference due to the nature of their approach, at the Point from which Fichte, as Introspectional Metaphysician, takes his departure.
(1) Edin. Rev., October, 1830, p. 1 S2.
the so-called real Factors of Being in all senses, that he ends by finding nothing else in the Universe but this Limit. Relation thus absorbs into itself all of what is related and otherwise called Real. Existence is from the Abstract Scheme of Existence. This is Absolute Idealism. Cousin, the French Eclectic Philosopher, attempts the reconciliation of the Metaphysicians. Comte, "the Founder of Positivism," goes over from Metaphysical Philosophy to Natural Philosophy, and confessedly abandoning the hope of any sufficient Intellectual Analysis of the Absolute Foundations and Laws of Being, attempts a Synthesis of Society, which, without any such Intellectual Analysis as a Basis, must of necessity be exceedingly imperfect. In the place of such Absolute Basis he has in part discovered important Laws of the Secondary Order, such as arise from the Observational Generalization of facts, and in part extended such Laws from the Lower Sciences into the Sociological Domain. In this he has made an important contribution, but only that, to the true Sociology.
115. At the very foundation of the German Transcendental Philosophy lies, as appears from what has been shown, the grand basic distinction between Reality and Negation, or between Something and Nothing. This distinction, brought into relation with Number, is elementarily represented by One and Zero ( $1 ; 0$ ). The One (1), the Head or First of Numbers, is here put representatively also for the Whole Series of Positive Numbers. The indication 1; 0 is placed opposite the name of Kant and the Philosophy represented by him, in the Typical Table (No. 7, t. 40). This is a text which will be resumed farther on. (t. 233).
116. It is next in order, however, to introduce the important statement.here that Unity, as a Principle of Being, and as implied in the Number One (1), is, in the Natural Order of Etolution, the Fundamental Principle of All Things.
117. It is not only, as above pointed out, the Focus wherein Quality and Quantity unite ; or, otherwise considered, the
centroid and nucleotic Transition, or Point of Decussation between them. It also combines them in the same manner with Relation and Modality. It is the Center of Relation as the Substantive Entity, around which Quantities or Attributions are grouped in the constitution of Being, by which they become a One Thing. It is Cause as the Head or Pivot of that which depends or proceeds, and by the Analogy of One (1) with Firss (1st), it is the Great First Cause ; and it is the Hinge or Turning-point, and in that sense again the Centre, of all Reciprocal Action.
118. Setting aside now the Primitive Zero, Modality is the Primitive Unity developed, or sundered into its orm Positive and Negative Sides ; whence we have Possibility (Positive), and Impossibility (Negative), etc. It is the Positive Side, as Possibility, Actuality, and Necessity, which is then allied with the Relative Unit (1) ; and the Negative Side, Impossibility, Non-Actuality, and Accidence, then fall back into their Alliance with Negation and Zero (0).
119. Unity is therefore the fundamental idea of Existence, as contrasted with Zero or Nothing, in the one direction; and as contrasted with All Plurality and Differentiated Development, in the opposite direction.
120. It was in the true Order of the Evolution of ideas, therefore, that the German Philosophers who first arrived at the idea of definiteness in Philosophy, should expend their effort upon the series of Conceptions which are symbolized by One (1) and Zero (0). The Hindoos had, so to speak, expanded theirs over the Domain of the Zero (0), as if it were All; and the Greeks had done the same in the Domain of the Unit (1) of Reality-excluding the Zero (0). The Germans specifically contrasted the two Domains ; the Totality of Reality, the Aggregate Something, on the one hand; and the Totality of Negation, the Aggregate Nothing, on the other ; and ended with Hegel upon the Ideal Line of Difference between them, where they become indifferent to, or equal to,
each other. Hence his famous formula as the basis of all Philosophy-Something $=($ equal to $)$ Nothing. c. 1.
121. Of the two corresponding Sides of Being, the Somethingand Nothing-Hemispheres of Existence, the Something is the Domain of Natural Science, where the Greeks began their Philosophy; and the Nothing, at first a mere Region of Vagueness when void, as with the Hindoos, is afterwards, when cut up by Exact Discriminations and Measurements, the Domain of Pure, Abstract, or Exact Science-Mathematical, Logical, and Analogical. The former (Natural Science) is the Concretismus, the latter (Exact Science) is the Abstractismus of Existence. Oken (in "Physio-Philosophy") and Humboldt (in "Cosmos") following the Metaphysical School of Thinkers in Germany, but passing over from Philosophy to Science, took naturally the Concrete direction. They were therefore merely or preponderantly Naturalists. It was in the direct distribution of Concrete Nature that Oken attempted a Classification based on Analogy, which failed for the want, as in the case just mentioned of Comte's Sociology, of any Exact Basis. The development of Metaphysics into Science, in the Abstract Direction-as the Metaphysics or the Logic of the Mathematics, specifically, has heretofore remained unaccomplished; while yet it is precisely here that the Exact Basis for all Analogical Science, and hence for a true Science of the Sciences is to be sought for.. This does not lie with the Series $1 ; 0$, but with the Series $1 ; 2$; as shown in the following paragraph.
122. The Numerical Series $1 ; 0$ exhausts itself at the first step of its development. It is not a Fructifying or Develop-

[^19]ing Series. In order to gain a single step farther than this in Numeration, we are compelled to reverse the Order, and making of the Zero (0) simply a Negative and hidden, and, as it were, a discarded basis or foundation, or ground, to begin with One (1), proceding then not downward to Zero (0), but uproard to Tiwo (2).
123. The new Series of Numeration thus initiated with One (1), Two (2), will then prove both Multiplicative and Precise, developing outward into Three (3), Four (4), Fire (5), etc., on to Infinity. It is this which is Scientoid, as contrasted with, and opposed to, the Series 1, 0, which is Naturoid and Naturo-Philosophoid merely.
124. This New Exact Series of Ideas, typified by 1, 2, with their compound or combined number 3 , is the origin of that immense Seriation or Distribution of the Universe, which founds the new Science of Universology. In its Fountainhead and First Branchings of Principles, this is ScientoPhilosophy, or the New Grand Dispensation of Metaphysic which is to predominate in the Future.
125. It is this new drift of Philosophy which has for its Clef or Signature, as it would be called in Music, 1; 2, representing the Scientoid and Developing Series of Evolution, as contrasted with 1 ; 0 ,-representing itself only, a stunted, Non-dereloping Series,-which is the Clef of the German Transcendentalism.
126. It is, therefore, the Spirit of the Numbers $1 ; 2 ; 3,-$ in the Simple Unity, the Difference and the Compound Unity of that Spirit-Unism, Duism, and Trinism, to be hereafter more specifically defined (t. 206)-which is the Ideal Basis, or Logical Fundamentum of the New Philosophy; of the New Science, and of tul Neit Scientific Metiod. It is this which is the legitimate Head and Source of a New and Universal Scientific Deduction, revolutionary of all the Science and Philosophy of the Past; and of the Practical Life, Individual and Collective, of the Race.
127. The Absolute Unit, not even contrasted with Zero (0), but absorbing it into itself, is the Analogue of The Absolute of Naturo-Philosophy; and when the Element of Personality, or of Personal Consciousness and Will is centered within this Unit, it is then The Absolute of Theology: "The One True God."
128. Monotheism, or One-Single-Godism (Greek Monos, sivgle or sole, and Theos, God), is, therefore, the Central and Governing Religious Idea. It was this Grand Pivotal Conception which was developed, practically and administratively, in the Theocracy of the Jews. This Central Doctrine, having upon its Unitary Side,-for even it proves capable of an interior distribution-no other Theory than this One Article of Faith, contained within itself, so to speak, no room for a System of Philosophy. The Monotheism of the Jews broke up, however, subsequently into two grand Currents or Branches of Development. The Absolute Monotheism comes out, in History, as Mahometanism. It arrives at its fiercest and sternest assertion in the Shibboleth of that gloomy but powerful System,-a whole Biblical Creed and a whole Governmental Constitution summed up in a single Sentence: "There is no God but God ; and Mahonet is his Prophet!" c. 1.
129. The other Branch, apart from the parent stem of the Jewish Monotheism, took on the larger development; and allied itself, in part, with the Philosophy of the Greeks ; and, in part, with the high civic morality of the Teutonic Nations of Europe. It thus became the Dominant Idea of what we now denominate Christendom. It has its own Central Development in Catholicism, and its Progressive Divergency in Protestantism. In its Totality, Catholic and Protestant, it is

[^20]itself a Progressive Divergency from the Absolute Monotheism developed in Mahometanism, which is the Unoid, or NonDeveloping side of Judaism. The procedure from Unity outward to Variety, or from One (1) to Two (2), and Three (3), and so onward, is always and everywhere progressional or developing; self-retention in the Absolute Unity is, on the contrary, first Conservative, and then, in a secondary sense, Reactionary. Hence the underlying Principle of the General Progressiveness of Christianism, as contrasted with Mahometanism, lies in the Doctrine of the Trinity, the deeper Philosophical Truth which denies the Absolutism of Unity, even in the Being of God himself, in that sense in which it would deny, in turn, the opposite and equally Divine Doctrine of Variety and Progression. Catholicism even is only Conservative and Retrogressive when contrasted with Protestantism. It is, on the contrary, eminently Progressive and Developing when contrasted with Islamism. The special claim of Socinianism and of the modern development of Unitarianism to "Liberality and Progressiveness," which claim is scientifically justified, comes nevertheless under a law of exception, which is too much a matter of detail for the exceedingly generalized treatment which is alone appropriate to the subject here.
130. The Three Grand Attributions, or, otherwise conceived of, the Three Personalities distinguishable in the one Godhead, have for their Analogues the Numbers One (1), Two (2), and Three (3), representative of all Numeration, or Variety of Entity, on to Infinity-all contained within the Absolute Unit, (1) ; this in turn, first contrasted with Zero (0), from which even, it must be conceived of as, in the Absoluto-Absolute Sense, undifferentiated.
131. Unity is Personal, Centralizing and Hide-bound or Bigoted, but Arbitrarily Just. Plorality is Social, Diffusive, Liberalizing and Equitable, but Reconciliative and Merciful. The Monotheism of Islamism is the grim Vindicator of God's Justice, and the Exterminator of his Enemies.

Christianity, with its Trinal and Composite Conception of the Divinity, is characterized by the tenderness which pities the Sinner, and provides the means of his Redemption and Reconciliation with God.
132. It is not the point here, at which to consider these Profundities of Theology, farther than to indicate their fundamental and inherent connection with the development of all Thought, and equally with the development of all Being and Erents; and hence with all Cosmogony, and with the Philosophy of History. It is thas, howerer, by fixing a Basis for a Sound Sciento-Philosophy, that we shall be able to grapple ultimately with all the higher mysteries of Theology.
133. I conclude this Chapter by glancing again at the most recent form of Philosophy (the Naturo-Metaphysic) heretofore developed, that given us by Professor Hickok, the President of Union College.
134. This profound and able Philosopher and Theologian might properly be denominated the American Kant. His works on Psychology and Cosmolog'y have not yet received the attention, in the world of Thought, to which they are undoubtedly entitled. After a powerful and condensed review of the past Progress of Philosophy, this great Thinker adds precisely those principles, and new elements, which bring the ideas of the Old Philosophy into a clear relation with the Standard Theology of Christianity. He places us at least at that exact point of Observation from which they can be analogically compared and revised. This statement relates more especially to his system of Psychology. His Cosmology, as pre-eminently a new Doctrine of Forces, has been already alluded to. Spencer has also developed the idea of Force, as, according to him, the Prime Postulate of Philosophy.
135. The Earth, Air, Fire, and Water of the old Greeks, as the Elements of Being, were the Naturoid or Materioid Derelopment of Naturo-Metaphysic. Matter is the Analogue of Nature. The Something-Nothing- $(1 ; 0)$-Theory of the

Germans is the Scientoid Stage of that Development. Number or Mathesis is the Analogue of Science.-Finally the Force-Theory of Hickok and Spencer is the Artoid Stage, Transitional to Action. Force is the Analogue of Art. All these are within the Sub-Naturismal Domain. Here is the Germinal Point, as within an Egg in the Ovary, of all the Intellectual Activities of Man.
136. The Naturoid Dispensation or Stage of Development is Feminoid ; the Scientoid is Masculoid, and the Artoid is Progevitive, or relates to the Prolification or Progeny from the Copulation of the other two. All True Organic Development results from this Copulation of these two Principles. Whether more Primitively and elementally,-as here, within the Sub-Naturismus,-or subsequently and in more perfection, as betwoen the Entire Naturismus and the Entire Scientismus, the Distinction of Sex is ever present, the Sexes being as it were the two Poles of Organic Existence everywhere. All Organiza. tion is, by Analogy, the same, that is to say, it is the same in respect to the Principles involved, and in respect to the Innermost Mode or Law of their Manifestation-whether it be the Organization of the Universe as a Whole; the Organization, by Nature unaided, or only partially aided by Man, of some Object or Domain, as of the Chick, or the Child in the Womb; or the Instinctive, or again finally, the Reflective, Organizations and Constructions of Man, from the dead Mechanism of an Engine up to the Living Mechanism or Organization of Society, in the Family, the Nation, or the World. c. 1-44.

Thus concludes the present condensed Review of the Naturo-Metaphysic. We are now prepared to pass to the consideration, more formally, of the new Sciento-Metaphysic or Philosophy, (or Philosophy, Science, and Method) ; which is the chief burden of the present work.

Commentary t. 136. 1. Organization is best illustrated in connection with the Physiological Branch of Biology-Epicosmology-the Vegetable, and especially the Animal Kingdom-the so-called Organic World.
2. The first step or stage of True Organization,-Creation in the Relative,
as contrasted with the Absolute, Sense of that term,-results, in the Embryo, from the action or influence of the Impregnative Male Principle upon the Yolk which is to furnish the Materials (Matter) of the new Being, and is the process technically known, in Embryology, as Segmentation. The Yolk or truc Mass of Nutritive Matter in the Egg begins its course of development by being, as it were, completely cut up, seg-mentized, sect-ized or sect-ionized (Lat. Sec-o, to $\mathbf{c U T})$, as we prepare our food by cutting or chopping it into morsels,-first with Knives, and then with the Teeth. The Male Principle is, as it were, a Knife, analogous with the Mrnd, as the Differentiating, Anatomizing (or Analyzing) instrument (De-sect-ive), acting on Matter; or, more restrictedly, the Analogue is the Pure Intellect, as the Keen Edge or Sharpness of Mind (acumen, Lat. Acuo, to sharpen), -acting upon the Mass of Materials in the Orum (the Incipient Conception), the Analogue of Matter, universally. It so performs this office of Segmentation, and presides over, and leads the way to, the Complete and Ultimate Organization of the future Being. This Organization is a true Synthesis (Putting-together), as distinguished from the Preliminary Synstasis (Standing-together), or Syncrasis (Mashing-together), of the mere Materials in the Unimpregnated Egg.
3. When the needed Impregnation has taken place, then, if there be the proper protecting and fomenting influences,-the Conditions of Development, -and especially the necessary warmth, as in the incubation of the Bird's Eggs, the further processes of Organization and Development continue to the Complete and Permanent establishment of the Life of the New Being. The Female Principle corresponds, therefore, repetitively with Substarce, and the Male Principle with Form.
4. Nor is this process of Segmentation a merely random cutting-up, but an orderly succession of Central and Equal Divisions of the Spheroidal Yolk, into Halves, Quarters, Eighths, etc.,--theoretically Hemispheroid, Quadratoid, Cuboid, -following the Masculoid Principle formulized hereafter in the Text, as Tendency to (produce) Equation (t. 535). Segmentation in the Human Ovum (or Ovule) is thus described by Cazeaux: "According to Barry and Bischoff, the Yolk undergoes the most remarkable changes of all, for, instead of forming, as hitherto, a compact, homogeneous mass, it is divided into two rounded por-tions"-[the rounding by Modification after division, or as the division proceeds], "the number doubling successively, in proportion as the ovum approaches the womb" [in passing from the Ovary, through the Oviduct or Fallopian Tube], "their diameter of course diminishing at the same time; consequently, in tracing the Vitellus" [Yolk], "along the duct, the whole Yolk will be observed to divide, into two regular rounded halves, then into four, afterwards into eight little spheres," [modified from their Typical or Ideal Form as partial Cubes or Cubules], "and finally, each of the last subdivides again; so that by reason of these successive subdivisions, the Vitelline Spheres become smaller and smaller, and the process ultimately terminates by causing the whole mass of the Yolk to resemble a mulberry in appearance." (1).
(1) A Theoretical and Practical Treatise on Midwifery, by P. Cazeaux, Member of the Imperial Academy of Medicine, etc. Fourth American, from the Sixth French Edition, p. 181.
5. The Male Privciple is thus Dualizing, Segmentizing or Sectionizing ny Appearance or Manffestation or Function, while yet, essentially, or in itself, it is,-like the Krije,-one; or the essence of Unity. The Female Principle is, on the contrary, in appearance and function, Unifyng or Collective (Conceptive, Lat. Con, together, and Capio, to taine, whence, to taite in and hold), while, in ITself, it is Duismal or cleft. (t.203). In other words, Masculism corresponds tendentially (and ostensilly) with Duism, but repetitively (and occultly) with Unism: and Feminism corresponds tendentially (and ostensibly) with Unism, but repetitirely (and occultly) with Duism (t. 19). This is in accordance with the Principle formulized farther on, in the Text, as the Antithetical Reflexion of Inherence and Appearance, or of Entity and Function. (t.754). See also what is said of the corresponding Antitheses between Philosophy and Science. (c. 1. t. 15.)
6. Embryonic Organization is the Natural Tppe, or God's Hieroglyphic Representation of all Organization, in the Higher and Complete Meaning of the term, -whether as studied by Man in Realms "not suljject to Human Intervention" (Comte) ; or as his Pattern and Guide, in Domains where Human Intervention and Excecutive or Administratire Achievement are possible, and needful.
7. Segmentation is Inter-sect-ation, the breaking or cutting-up into Seg-mentc, Sect-ions or Sects; and it is through the Inter-sect-ation of the Christian World (the Multiplication of Sects), from the Impregnative Masculine Influences of the Intellect-the Rationalistic Element-that Christendom is being prepared for an Infinitely higher and more permanent Spiritdal and Organic Uinity, a New Catholicism infinitely more Comprehensive and Perfect than the best which the Old Catholicism was competent to achieve. That was what Comte has happily denominated a "Primitive Synthesis" of Socicty (ecclesiastically), and was essentially Provisional, and destined, in a sense, to be superseded, and, in a sense, to be absorbed, or built upon as a foundation (subsumed), -hence rightly denominated the Mother(-Church)-Principle.
8. Proto-Christianism, or more broadly Proto-Religionism, represcnted ly thle Old Catholic Church, is Feminoid and Naturoid; hence tendentially corresponding to, or fanatically devoted to, the idea of Unity, while repetitively or by its oucn Nature, and in accordance with its Methods of Coercion and Restraint, it is replete with the Principle of Schism; whence it happens that She, (the Old Catholic Church), is the Mother of antugonistic and hostile Sects.
9. Rationalism, allied with and partially embracing Scientific Scepticism and Protestuntism, is, on the other hand, Masculoid and Scientoid, hence tendentinlly and ostensibly corresponding with Dursm, Schism or Sect, while ret there is in it the occult Principle of Complete Adjustment and Ultimate Unity, throcgir the Obtention of an Undentable Scientific Basis of Faith. These aro Solutions of immense significance which can only be glanced at here.
10. The presence of a Minor Proportion or Suthlominancy of the Masculine Principle in the Female Procreative Product (the Tolk), and hence of a Primitive or Anticipatory Independence of all Masculine Aid and Co-operation, in the Female Generative Effort, (and indeed of a similar independence of Female
help, in a still minor degree, in the Male Product), is wonderfully illustrated in the following lesson from Natural History.
11. "On the coasts of Spain (in the Bay of Biscay) which are so violently beaten by the waves; we often observe small hillocks of sand pierced by an infinite number of minute openings half-covered by a thin projecting margin. These mounds are either found behind some large rock or in some deep fissure, although occasionally they are fixed on an entirely uncovered point. These little hillocks or mounds, which look very much like a thick piece of honeycomb, are in reality villages or populous cities, in which live, in modest seclusion, certain Tuberculous Annelids known by the name of Hermellas,-creatures as curious as any that fall under the notice of the naturalist. Their bodies, which are about two inches in length, are terminated anteriorly by a bifurcated head bearing a double bright golden colored crown of strong, sharp, serrated silken threads.
12. "On leaving the body of its mother the Egg of the Hermella is composed, like all perfect Eggs, of four distinct parts; that is to say, of a Yolk or Vitellus, a germinal vesicle (vesicle of Purkinje), placed in the interior of the Yolk, a germinal spot enclosed within the vesicle, and finally of a very fine membrane which envelopes the whole. (In the eggs of birds the white, or albumen, and the shell are merely accessory parts which are formed in the oviduct after the actual egg has left the ovary). The germinal spot and vesicle are two minute transparent globules; while the yolk is formed of very minute opaque granules, united together by a perfectly diaphanous Matrix.
12. "If we throw some of these eggs into sea-water in which some of the Male Organic Corpuscles are moving, we shall see, after a few moments' immersion, that it has become the seat of a condition of vital activity which may be easily watched through the microscope. A mysterious force seems to mould these elements, blending them together on all sides.
13. "The Yolk presents alternating movements of Contraction and Expansion, the spot and the vesicle successively disappear, a transparent globule escapes from the midst of the vitellus, and then begins the singular phenomenon discovered by MM. Prevost and Dumas. A circular streak is observable round the vitellus, which divides spontaneously first into two, and then into four parts, and goes on subdividing thus successively until it is only composed of very minute globules. In proportion as this cleavage progresses, the granular character of the vitellus diminishes, and finally disappears. The entire mass assumes the appearance of young tissues. At this period we soon begin to perceive a few small filaments which are at first immovable, but which speedily begin to strike the liquid with a jerking motion. These filaments become more and more multiplied, when the young hermella, after having balanced itself for some time, as if to try its nascent organs, suddenly leaves the solid plane which supported it, and throws itself into the liquid under the form of a small and irregularly formed spherical larva bristling all over with vibratile cilia.
14. "Such are briefly the phenomena presented by the fertilized" [or impregnated] " egg of the hermella. In twelve, or, at most, fifteen hours, this egg bicomes transformed into an animal, which swims about, stops, and guides
itself, and thus gives evident signs of spontaneity. The same egg, if left in the liquid without being brought in contact with the fertilizing element, becomes deconsPOSED in about forty or fifty hours. We must not, hovever, suppose that it is the less active on this account. The characteristic activity of the first pmases of development are manifested here no less than di the fertilized egg. The Yolk dilates and contracts, the spot and vesicle disappear, the vitellus undergoes cleavage and becomes thinner. For the first fers hours it is almost impossible to distinguish a fertilized from a non-fertilized egg. In the latter, however, the movements increase in rapiditr, while they diminish in regularity, and, instead of resulting in the Organization of a New Being, they terminate in the destruction of the germ. If, however, we take some of these eggs which seem very nearly decomposed, and bring them in contact with the fertilizing corpuscles, their movements will slacken and become mre regular; and we may even frequently obtain numerous swarms of larvæ from eggs that have been deposited for nearly forty hours. [Within the very last hour before actual decomposition commences.]
15. "These facts, which I have repeatedly verified, appear to me to be thoroughly conclusive. They teach us that the Movements which have their seat in the Egg immediately after its appearance are entirely independent or fertilization. The disappearance of the germinal spot and resicle, the oscillations of the yolk and its cleavage, are, in tue isolated Female Element, so many signs of special activity and of a vitality which beloncis то it. When these movements cease, and when the egg becomes decomposed, it is in reality dead.
16. "Thus the fertilizing corpuscles after separation from the Male retain a certain amount of vitality. In the same manner, on their separation from the mother, the eggs possess a special and individual life. Even in non-fertiiized eggs this vitality is manifested by spontaneous and characteristic movements, precisely the same as we observe in the case of the Male Corpuscles. In the latter" [the Male Corpuscles] "all indications of vitality disappear in a comparatively short time, and it is precisely the same in respect to non-fertilized eggs. In the fertilized eggs, on the contrary, vital movements are prolonged and the resdlt is the complete Organization of a Living Beng." [For "Male Corpuscles" put Intellectual Schemes, Theories, Abstract Conceptions and Plans, as for example of Social Reconstruction, never practicalized, that is to say, never adjusted and adapted to the Instinctual Liring Movements of Society. For "Non-fertilized Eggs" put Spontaneous, Instinctually conceired, unintellectualized, Movements, Institutions, and States or Stages of Societr, even though intuitionally, or spiritually, or inspirationally founded and guided. Finally, in the place of "Fertilized Eggs," put the Spontaneous, Instinctual, or Naturismal Institutions of Snciety afterwards impiegnated-at any time before "decomposition" or dissolution-by the truly discorered Scientific Knowledge of the Laws of Organization, as involved in the Universal Laws, or the proper Logic of Being-by, in other words, Universological Principles and Methods of Action.]
17. "The Contact of the Egg with these Corpuscles" [Male] "is not, there-
fore, to give or to re-avakien a life which is already present in the Egg, and which is manifested by appreciable phenomena, but rather to regulate tee exercise of this Force, and thus to secure its duration." (1).
18. This Subdominant or Minor Presence of the Male Formative or Regulating Principle of Organization, within the Female Mass of Prepared Materials, giving to the Female Principle or Elemeat an incipient and partial independence and a deceptive promise of a full independence of the Male Element, and a similar shadowy independence of the Female on the part of the Male Element or Principle, involve and illustrate three Principles or three Modifications of one Principle of Universology, subsequently expounded in the Text, namely 1. Inexpugnability of Prine Elements (t.226) ; 2. Overlapping (t. 527) ; and 3. Mere Preponderance (t. 526).
19. The Dissective Knife in the Hand is repeated by the Teeth in the Mouth, as just intimated (c. 2, t. 136), and especially by the Incisors (Cutters) or FrontTeeth, and pivotally by the Cuspids or Eye-Teeth (pointed Cutters). These, then, are also an Analogue of Intellect. Dentition, and especially the cutting of the Eye-teeth, is therefore, and is instinctively recognized as being, representative of the incipient development of the Reasoning Faculty.
20. The whole Dispensation of Proto-Religionism in the World, extending up to the present hour, is pre-eminently represented in Christendom by the Old Catholic Church, though including also all the Sects, and by the Corresponding Entire Social Development. All Doctrine prior to the Discovery of an Intellectual Basis of Faith and Doctrinal Reconciliation,-all in fine which has BEEN, or which has depended on, the Faith of Belief instead of the Faith of Knozlelge-Corscsponds with the Absorption of Nutrition, or the Sucking Process of the Infunt. It is not to be despised, as it was indispensable for the infantile period, -a perfect adaptation to that age,-and will ever remain, in Subdominance, through the adult age, in the form of Nutritive Drinks, Gruels, Panadas, etc. It is not, on the other hand, to be taken, any longer, Dominantly, or in Preponderance, as appropriate Adult fond.
21. The Deutero- or Sciento-Religious Dispensation (with the corresponding General Dispensation of Affairs) now about commencing its Inauguration in the world, corresponds, on the other hand, with the period during which the Individual is completely furnished with Teeth. The Development of Protestantism and Dissent represents the successive painful stages of Dentition, or rather, the procuring and subsequent loss, (the decay of Sects), of the whole Provisional Set of Deciduous or Mrilk-Teeth. The demand will now increase in the Unirersal Human Society for more solid Mental Food corresponding with the higher development and maturity of the Being;-in one case the Individual, and in the other Society at large. The accompanying process of Ablactation or Weaning must cost some suffering, more or less, according as the Being is more or less healthy and harmonious. "All Transitions are painful." (Fourier). This Analogy of the Teeth is stated and illustrated in a general sense in the Text, later ( t 461), but it seemed requisite to state it in this connection.
(1) "Rambles of a Naturalist." qunted by Hugh Doherty, in "Organic Philosophy, or Man"s True Place in Nature. Vol. I. : Epicosmology." pp. 185-192.
22. Primitive and Infantile Stages, and hence Childhood generally, corrcspond, repetitively, with the Female, the Child being intimately associated with the Mother. Social Institutions pertaining to such stages are necessarily prorisional, like the clothes of the infant and child, and are thrown aside, or pass into nonuse, not alone from wear, but from inadequacy or want of sufficiency of accommodation. Still more primitive and transitory is the Effort of Feminism to organize, and to produce, unaided by the Masculdie Element;-Feeling apart from Knoucledge ; Intuition and Inspiration apart from Science.
23. The lesson drawn from the case of the Hermellas (c. 10, t. 136) is repeated, in the FIuman Female Function, by the phenomenon of Spontaneous Orulation. The Ovum or Orule leaves the Ovary, though unimpregnated, as if it were impreguated, and commences, with apparently flattering prospects of success, an organization, which is destined soon to run into confusion,-so sonn as it has passed through the few first stages, and to end in premature dissolution. (c. 1.4, t. 135).
24. It results from what has just been shown (c. 22, t. 136), that whatever is said of a Feminoid Dispensation or State of Things, applies analogically and repetitively, (mutatis mutandis), to a Childhood-Dispensation or State of Things, (Infantoid). On the contrary, that which is Masculoid has a similar Repetitory Relationship with Old Age; the Senior (Senectoid or Senatoid) Dispensation; (Lat. senex, an old Man, senatus, a Senate or Congregation of Seniors.) The Feeling or Sentiment of Youth is thus associated with the Female, as the Child with the Mother, and the Knowing or the Wisdom of Age with the Male. This is, however, in mere Preponderance, as by the turning of a balance, as will be shown elsewhere; and may by overlapping be exceptionally reversed. (t. 257).
25. But, why, if the Naturoid, Instinctual, or Provisional Synthesis, of Society is Feminoid, does it happen that Man (Male) has always, during such periods, or during the one whole period of that character, extending up to the present time, held and exercised an undue supremacy over Woman?-And that it is only with the dawn of the Scientoid or Reflexionoid Period, (Masculoid instead of Feminoid), that Woman is beginning to be elerated to a General intellectual recognition of her equality, and sentimentally to a corresponding Supremacy on her part? It is precisely for the reason that each, unreflectingly, assigns the Supremacy-not incleed in their Primitive Selfishness or Proprium, but with the development of Spirituality and Sentiment-not to that which itself is, but to that tozocrds which it worshipfully and respectfully tends,-hence Feminism to Masculism, and Masculism in turn to Feminism.
26. It results that a Feminoid Age, Period, or Dispensation, looks naturally to the Male Element as its Lord and Master, such being the Spontaneous Tendency, or Natural Oljective of Feminism (but ideally, or without full Knowledge on the Subject). Hence also and necessarily, such an Age is Theological and Religious (Proto-religious, Pietistic). God is Personally conceived of, and hallowed and cherished as immeasurably above Nature, while also He is wholly endozoed with Masculine Attributes. This is instinctual womanly worship.
27. For the same reason a Scientific Age (Mascuioid) tends to elerate the Appreciation and Worship of Nature and the Laws of Nature into the Su-
preme rank, and to depreciate or ignore the Primitive Faith. It ceases in other words to be religious in the Primary Sense of that term, (Proto-religious), and becomes Skeptical and investigative, transitionally to becoming determinately or exactly Knowing, and thence Sciento-, or Deutero-Religious. This is Masculism (Intellectual) idealizing and doing homage to Feminism (Instinctual).
28. The Third Period, Artoid, will discriminate, first, Accurately and Scientifically, through the Intellect, and then, Esthetically or Artistically, through the Sentiment, the respective grounds of the Supremacy of the two Sexes, in their several spheres and relationships to each other. The Second Period is of short duration, and is merely transitional to the Third. They are therefore not always very definitely discriminated, the Second Stage being put representatively for the Third also ;-and alooays remaining its Governing Head.
29. The last word of Prof. Bain's great treatise, "On the Emotions and the Will" is the following. "The common use of the word Feelivg is, being mentally awake or Conscious,-being pleased, pained, or excited; and the only real question at issue is that above discussed with reference to Hamilton's Views;-Is Feeling based on Knowing [or contrariwise, Knowing on Feeling], or are Feeling and Knowing Co-ordinate, although Inseparable Functions of the Mind?" (1).
30. When it is known that Feeling is Analogous with Substance, and Knowing with Form (c. 1, 2, t. 136, above), we see very clearly and more extendedly what is the nature of the question here put, and so laboriously discussed by these philosophers. It is, namely, whether Substance (Matter) originates from Form (Ideas)? Or is the Order of Development the opposite of this?-Or are Substance and Form co-ordinate, though inseparable [Inexpugnable] Factors and Functions of all Being, the joint Necessary Elements in the very Constitution of Things?
31. We are here face to face with the larger philosophical question which has come down from Plato, and which has divided the world of thinkers into the two hostile camps of The Materialists and The Idealists;-with the third or Mediatorial School, The Eclectics, striving to balance the Vibration between the other two. This is also the question of the Natural and the Logical Order, and of Priority in their Relationship;-Which, in fine, is first, the Chicken or the Eg ?
32. It is a great step gained when we can thus generalize the special question, -translating Feeling and Knowing into Substance and Form, or Matter and Idea(s); and then finally into the two Grand Orders of Development which preside over all Evolution whatsoever. With the basis now laid in Universology I doubt not that the following answers will, after due discussion, prove satisfactory.
I. That from the Natural Standing-point (Materialistic),-that is to say, viewed with this natural bias of mind in the individual investigator,-Feeling, Substance, Matter, Nature, The Natural Order, and the Egg are First, (that is to say, historically, or as beginning the Natural Career of Develop-

[^21]ment, in Time) ; and Knowivg, Fory, Ideas, (Thought), Scrence (or Logic), The Logical Order, and the Chicien (the Organized Bcing) are Last, or Secoudary, Derived, Ultimate.
II. That from the Logical, Ideal, or Spiritual, Standing-point, related to Space (c.2, t.9), All this is reversed (-by Terminal Conversion into Opposites, t. 83), and the counter-verdict is entered: Knowing, Form, Ideas, Science, Logical Order, and Organic Perfection, are, First, as the Causative Inherent Necessity of Being, and Feeling, Substance, Matter, Nature, The Natural Order, and the Egg, are Effects or Results therefrom.
III. That from the Absolute Standing-point (Absolute Idealism), Feeling and Knowing, or Substance and Form, respectively, are "Co-ordinate although inseparable functions of the Mind," and Factors of Being. They are, in other words, inexpugnably united, while susceptible of Development in either Order, in accordance as one or the other of either Couple of Elements predominates. (Mere Preponderance, t.526). The Corresponding Concrete Objects (Egg and Chicken for example) are distributed in the relations which they hold to our minds accordingly.
IV. That, finally, from the Integral Standing-point (or -points) EacII of the preceding Viezes and Statements (I., II., III.) is Alike true, when confined to its owon proper Aspect or Angle of Vision, and each of them alike false, when put for the Whole Truth of the Subject, or as excluding or denying the other counterpoising and related statements upon the same subject. This is an instance and illustration of the Reconciliative Harmony of Ideas (Title-page), and of the General Method of Universology and its related Plilosophy of Integralism. (a. 1-10.)

Annotation c. 32, t. 136. 1. It is the same question in another form which has grounded the voluminous discussion of the philosophers on the nature of Perception, or the Order of the Acquisition and Mental Evolution of Ideas. J. Stuart Mill states clearly the diffurence between the Kantean conception of what occurs in the acts of knowing and the earlier form of the theory of that subject as held by Hartley, revived by James Mill and Profossor Bain, and accepted and defended by himself. (1). This statement may be epitomized as follows: Kant holds that the common sensible qualities of things, as whiteness, stvectnes; etc., are brought into the mind through the senses, and pertain to Things in Themselves external to the
mind; but that the Necessary Conditions of All Perception, as the ideas of Time and Space, and the categories of the Understanding, exist as the essential Forms of Thought, within the mind itself, and are contributed, by the mind, to the compound perception of the thing; which, as a conception in the mind, has thercfore always two factors, one from without, and the other from within the mind. In Universological phrase, the Substance of the conception is from without, and the Form of the conception from within.
2. The Hartleian theory, on the contrary, traces back the derivation of the second of these factors of knowing, and posits it in the first, so that, from this point of view, every thing which is erer in the mind comes into it originally from.
(1) Review of Ifamilton,
33. It will be observed that the Impregnation of the Ovum, Birth into the Nero (Extra-uterine) Life, Dentition, The Arrival at Püberty, or the Adult Age, and finally, Old Age itself, are associated, as indicia, with Masculism, and yet that Masculism as a Whole, is, in another sense, treated as characteristic of a given Period or Dispensation. This is owing to a Principle of Overlapping, and to The Commingling of Analogies in the Higher Spheres, Universological Principles which will be expounded at other points.
34. In a preceding paragraph of this Commentary (c. 21, t. 136), the Deutero-, or Sciento-Religious Dispensation is spoken of as only now about commencing its Inauguration in the World. This is said in no canting or pretentious way, but as itself a Scientific Truth, pregnant with importance, revealed and established by Universology. It requires, however, to be explained why the special Period of Scientific Erolution from Bacon to the Present Time is not entitled to be regarded as being, or, at least, as belonging to this New Dispensation in the Total Career of Humanity. The Magnificent Series of Scientific Discoveries and Stages of Rational Progress occurring during that Period, as detailed, for example, by Dr. Draper in his "Intellectual Development of Europe," would seem to entitle it to that Degree of Consideration.
35. With no intention of depreciating this Great Modern Awakening of the Iuman Intellect, and the achievements which have already resulted from it, I must affirm, and will show, that it does not, however, fall within, nor constitute a part of, The Proper Intellectual or Rational Dispensation in the Larger Evolution of Human Affairs. This latter Dispensation can only be indicated and initiated by the actual Discovery of The Unity of the Sciences.
without, and through the avenue of the senses; (that is to say, from a source relatively external, even though under the Berkleian conception, now called the Relativity of Knowledge, the whole operation be within the mind itself, and, in that sense, internal).
3. Since Substance is, in this relation, the External element, this latter doctrine is equivalent to affirming that Form is merely a something derived from Substance, and hence that Substance is the basis and origin of all things-for, by Analogy, the constitution of an idea is identical with the constitution of a thing or of a voorld. This latter doctrine is therefore, in fact, in accordance with the Natural Genesis of Enourledge in the mind, or, in other words, it is the process of knowing viewed from the Natural StandPoint, and in the Natural Order of Ero-lution-as shown by Cousin.
4. The Mystical and purely Ideal theory of the same process is not here noticed by Mill, and is still different from either of those which he does specify. It is, namely, that the Substancive Half of Perception is, itself, on the contrary, solely derived from the Necessary Laus of Thought in the Mind; that, in other words, Ideal Lavo, or Abstract Form, itself, is the Generator of all that appears as Substance, and that Substance can always, by analysis, be reduced back into it ; that this Ideal and Abstract Form pertains inherently to Mind, and is the God-Principle or the Creative Principle in the Universe of Being; that TypeForms assume to themselves Matter or Substance, and so create the Real or External World. Such is substantially the Hegelian Logic on the one hand, and the Idealism of Plato, on the other.
5. This Absolute or Pure Idealism as-
36. By the Principle formulized later in the Text (t. 111), as The Inexpugnability of Prime Elements, no Age can be wholly without the presence of the Intellectual Element, while in certain subdivisions of that Age or Dispensation, even though Unintellectual in the main, it must come forward and play a somerohat conspicuous part, and especially ut the Dawn, and as the Transition to, the Proper Intellectual Age. The Proto-religious Dispensation, mainly under the Control of Feeling and Instinct, has therefore nevertheless had its own remarkable Phase of Intellectual Activity, as the Prewude to the Proper Reign of the Intellect soon to be established. This is all that the whole Inductive Period in the Evolution of the Sciences will prove to have been. It is the Masculoid Side of a Feminoid Development merely; or, changing the Analogy, as we are allowed to do, by The Commingling of Analogies in the Higher Spheres, it is the Adultoid Aspect or Stage of the Infantoid Period or Dispensation of Affairs, and Premonitional of the real Adult Life.
37. Frrom the Feminoid Standing-point, (Intuitional, Pietistic, Proto-religious), it is a natural fallacy, therefore, to regard the Intellect as a still more Feminoid Adjunct to itself, and to regard itself as relatively Masculoid in the sense of being the more potent and Substantive Element of the two. The Sexual Analogies are thus reversed by confounding a Minor with a Major Distribution. This happens, for example, with Swedenborg, who, after laving correctly taught that Woman is [in Preponderance] "Voluntary" (related to the Will, or a "Form of Love," equivalent to Feeling), and that Man is a Form of Wisdom or the Understanding (1)-goes on elsewhere to affirm that The Will, as a Husband, espouses the Understanding as a Bricle (2);-which is the confusion alluded to, and a contradiction of the previous doctrine.
sumes, in other words, that the Abstract Laws of Being are, in themselves, IdeoReal Existences, and that, as such, they are the very Thoughts of God, and hence Logico-Potontial, or Actual Creative Forces, (the Logos-Principle) ; or, FinalLY, and as the Extreme of the Doctrine, That these Laws of Being transcend all Existence, as themselves the Primal or Anticipatory Inherent Necessities or Conditions of Being; so that, If God, even, exists, they must have created Him, and must remain the Regulative Principles of His Nature. Theology, according to this latter view, is a branch of Ontology ; the Science of God a branch of the Science of Being Universally ; and Religious Opinion is wholly amenable to Radical Philosophical Analysis and Pure Science.
6. The Scheme of Theory, Opinion, or Doctrine (Unismal), which derives all Existence and its Laws from the Personal and Irresponsible Will and Power of God, may be denominated, as a technicality, Arbitrism. The Counter-Doctrine, that All Being originates from Necessary Law (Duismal), is then Logicism. Other terms for the Allied Discriminations will be furnished elsewhere.
7. There is here a Terminal Conterston into Opposites, and Substance is made to be wholly derivative from Form. This is the Logical, and at the same time the Spiritual, Order, characteristic alike therefore of the High Transcendental and of the Mystical Schools of Philosophy. The Logical and the Spiritual Orders coincide, because it is in
(1) Hearen and Hell, No. 309, et passim.
(2) Divine Love and Wisdom, Nos. 402 et seq.
38. It is in this fallacious manner that the Religious World generally regards Knowledge and the Whole Intellectual Development as, at the best, something merely Accessory to Religiou,-a servant, or hand-maid, or page, or, at most, a spouse, and so of the Feminine Order ;-not dreaming that the lad is her future Fusband, and in a sense, therefore, her future Lord and Master. And hitherto, the Representatives of Mind have either violently revolted against, or have virtually submitted to this assumption, and this because their sphere has been merely a Sub-dominance or Minor Manifestation within a Dispensation which, as a whole, is based on the Faith of Belief, and not on Positive Knowledge.
39. The Intellectual Age, as sঠch, the True Masculoid Development of Humanity, enters on the scene only when, by an Absolute Analysis, all Intellectual Truth can be deduced, in Harmonious Adjustment of Parts, from a Center of Logical Necessity as Absolute as that which Religious Doctrine has assigned to the Personal Will of God. This will not result in the destruction of the Previous Feminoid Dispensation; as the Pseudo-intellectual Development, (Pseudo, because working in trammels and in Abnormal Subordination), within that Dispensation, has threatened to do ; but in a lifting of it into a higher and truer dignity-though still in subordination to itself-by expounding its mysteries, saving, accepting, and cherishing the Spirit and the Renewed Forms even, of that earlier Dispensation.
40. The Third and Ulterior Dispensation,-Artoid, Active-to which the Second is immediately Transitional, but of which it is perpetually to remain the Governing Eead-will then arise from the Marriage and the Love-Embrace of the two former, in their Relation of Virile Supremacy and of a true Feminine Sub-
the same direction downward, whether we proceed from the brow, or the chest, to the feet. Cousin has again shown that the Natural and the Logical Order coexist, and must both be taken into the account in the constitution of every perception, and I will add, in the creation of each thing and of each world, and of the total Universe of Being. It is somewhat surprising that any one of the single or one-sided solutions of the problem of Thinking and of Being-which are identical-should now be brought forward triumphantly, as if it were the whole.
8. The Point is representative of Subtance, and the Line of Form. It will be shown elsewhere, by the most searching analysis, that any possible conception of Point is resolvable, by analysis, into an infinity of Lines; and contrariwise, that every Line, is, in the same
manner, resolvable into an infinity of Points. This is the inherent Inexpugnability of Prine Elements, and the Convertible Identity, which lie at the very core and foundation of the constitution of all Being. Neither of the twoo Simplisms on the twoo sides of the Complex Truth, must be put, AS IF IT WERE the whole, in the place of the Complexity itself. Like the two rills which are disparted by a pebble on the summit of a mountain, the two streams of Philosophy which originate from this seemingly trivial dirergence, are world-wide in the views which they entertain and inculcate upon erery subject of human concernment, and in their influence upon the whole destiny of Man. They are the Sensationalism and the Idealism into which Morell, in his History of Philosophy, subdivides the whole Philosophical Domain. It is somewhat surprising, I
ordination respectively. The Stalwart Youth who breaks array somerrhat rudely from the control of the Mother, becomes, when touched by Love, the ardent admirer and the staunch protector of the Maternal Sex in the Person of his Bride.
41. The Intellectual Dispensation, as such, will have also, within itself, its own Minor Development of the Faith of Belief, as complementary to its Stock of Positive Knoocledge. This will correspond inversely to the Preliminary Development of Science and Rationality prior to the Knowledge in the world of any basis of Scientific Unity.
42. The Discrimination to be made is therefore Fourfold, instead of merely Double, and analogous with what is suggested by the following tabular view :

> 2. Masculismal $\{$ 2. Feminoid Men. ("Effeminate"). (Male.) $\quad$ 1. Masculoid Men.

1. Feminismal $\underset{\text { (Female.) }}{\text { 1. Masculoid Women. ("Mascuine"). }} \begin{aligned} & \text { 2. Meminoid Women. } \\ & \text { 1. Femen }\end{aligned}$

The terms, Proto-Christian, Deutero-Christian, and Trito-Christian, for 1. The Old, 2. The Intellectual-Transitional Dispensation about commencing, and 3. The Ulterior New Christian Dispensation, as the Composite Blending and Harmony of the tro prior Dispensations, have been expanded above (c. 8, t. 136) into Protn-religious, etc., to embrace more than Christendom; and inasmuch as Religion is still only a Phase or Department of the whole Societary Life, these terms should take on a still further enlargement of the extension of their meaning, as 1. Proto-Social (or Societary), Deutero-Social, etc. As Periods rie
repeat, that, at this day, and after such discriminations as that above alluded to by Cousin, either of the partialisms in question should be revived and insisted upon as if it were the whole of the case. The temptation is, however, excessively strong to fall into this error, inasmuch as the individual organization of every mind leans in some measure to the one or the other side of the question; and inasmuch as it is extremely difficult that he who has traveled over a road in one direction, should realize to himself that he only linlf-inones the road, until he has reversed the operation, and passed over it again in the opposite direction ; inasmuch, in fine, as each doctrine does apparently and, in a sense, cover the whole ground, and exhaust the subject. But Nature is more complex and subtle than Man has supposed.
9. This Ideal Schema of Pure Abstract

Law, (or rather of corresponding Spiritual Attenuation in the Concrete World), with the energy inherent thercin, anil the emanations therefrom, constitutes, according to the Ideala-Spiritual Theorry, the more Real World, and the Natura?Real is then a world of Appearances without Actual Reality. Such is Idealism, such is Spiritualism, such is Myaticism. Such in fine is Transcendentalism. The details of this theory will b? more elaborated at various points fuy. ther on. See especially t. 0000 . This Schema or Fübrillation of Abstractions, and corresponding concrete Attenuations, has for its Analogue the Nerrous System in the Body, and thence the Brain, and thence the Mind which inhabits the Brain, and thence the Eyc as a little Brain projected from the center of the great Brain,-the One All-Secing Eye symbolizing God ; and thence the Lighit-
should then denominate the whole of the Race-Existence of Humanity up to the Present, The Proto- (or Primo-) Societismus; the Short Transitional Period, during which the Absolute Intellectual Analysis is being effected and established in its Gorerning Position, the Deutero- (or Secundo-) Societismus; and the Final Harmony of Feeling, Ideas and Action on the Planet, the Trito- (or Tertio-) Societismus. The New Language will furnish more Euphonious and Manageable Technicalities.
43. Let not the staunch defender of " Woman's Rights," or " the Equality of Woman," take offense prematurely at the idea that there is any sense in which Woman is legitimately subordinate to Man. The whole Actual or Relative Constitution of Things in the Entire Universe deals in Superiorities and Subordinations, of different Styles, Grades, or Series of Distributions. What is Superior in one Aspect or Order of Aspecting the Subject, is Inferior in another and different one. There is a Sense in which the little child is the Superior and Governing Personage in a household, as all interests are apt to be centered on it and its wants and needs. This is govermment by Influence, and not by Administrative Authority, and it is, preponderantly, in a manner allied to this, though still different, that Woman will always influence so potently the destinies of Humanity, and only exceptionally, or in Subdominance, as a Ruler in the External Administrative Sense; though in this respect she should, on the broad grounds of Universal Rights, be absolutely without hindrance or obstruction, in making available all the talent she may have. Political Rule is allied with Laws, Jurisprudence, the Legal Profession, Abstract Principles, Logic, and Exact Science. What is meant is that Man by his Mental Constitution stands

Rays emanating from and impinging upon the Eye, or else constituting the Halo or Glory of the Religio-Artistic Conception, and thence Water and all Mirrors and Reflectors as representing and symbolizing the Light. This is against, or antithetical to, the Muscle, Flesh and Bulk of the Body, which symbolizes the outer Material World; the Nerrous as against the Muscular System of Philosophy, Christianity, Science, etc. In simple terms, Man is the Head of the World, and corresponds, therefore, or is analogous with, the Head of the Man himself within the Individual Human Body, (Rational). The Breast of the World is the Atmosphere, which then corresponds with the Breasts or BreathRegion (Spiritual, Spiro, to breatire). The Loins and Basis or Fundamentum of the World are the Surface and the Body or Mass of the Earth ; (the Lap and

Bosom-the External or Surface Breast, allied with the Lap-and Womb of Mother Earth, which are often poetically and figuratively alluded to). These correspond with the Abdomen (the Lap, Womb, and Bosom or External Breast) together with the Brawn of the Seat and Thighs of the Indiridual Human Body. The Limbs of the World are the projecting Arms and Legs of the three Diametrids rectangularly arranged relatively to each other, denominated elsewhere the Cosmical Bi-Trinacria, (t. 596),-the Extremities directed to the Four Cardinal Points, the Zenith and the Naclir, respectirely. These correspond with the Four Limbs and with the Cephalic and Caudal Elongations of the Trunk respectively. These statements are entered here merelr, and reserved for further explanations at other points.
10. It will be readily perceived now,
more immediately related, (Repetitively Correspondential), with this whole Department of Affairs, and Woman more so with Physiology, the Medical Profession, Concrete Conceptions, the Natural Sciences, and with Art. It is the Universological Doctrine, therefore, that in The Absolute, the Two Sexes are Absolutely Equal, that is to say, by balancing all different considerations; but that in the Relative or Actual, No two Things are ever Equal; and that by Analogy we may determine scientifically and accurately the Relative Superiority and Inferiority in any given case of Relation, no longer leaving the matter to the decision of prejudice or interested opinion. An important Universological Formula, expressing this Conjunction of the Democratic Equalities with the Hierarchic il Superiorities of the different Entities of Being, is

## Equality of Worth with Difference of Rank.

44. The relations of the Sexes in the sense here discussed will be resumed in the Text, further on (t. 772). Whatever may be the General Statement, the Actual Results, it must be borne in mind, are greatly affected by the Principles of Overlapping, and mere Preponderance. The Subject is one, henceforrard, for Study, and not for preconeeption and partisan violence.
that the Kantean Philosophy holds middle ground between the Sensational and the Idealist conceptions, assigning one factor of Knowledge to Matter, and the other to Mind: whereas thcy derive the whole of Knowledge from Matter, or from Mind, exclusively.
45. Finally, I am now able to state, without stopping to enlarge upon it, the Universological aspect of the question. It is, in the first place, integrative of all the preceding views. It then enlarges them all; for, in summary, it is this: That Matter and Mind antithetically reflect each other; that each of them has in itself, by Echo or Analogy, ALL of the Elements which are in the other,--that is to say, both Substance and Form ; that the External or Sensational side of a Perception is the Substance, and that the Thought-form, (whether called "a Category of the Understanding," or " $a$ law of association,") is the Form of the Idea; that the Substance and Form of Ideas in the Mind correspond exactly to the Substance and Form of Matter or Things in the World ; but with Antithetical Reflexion in respect to Proportion ; the Form-Element
predominating in the Mind, and the Sub. stance-Element predominuting in Matter; and that, hence, Mind is relatively Masculoid and Governing, and Matter relatively Feminoid and Concessive, in their antithesis and conjunction with each other. This is so notwithstanding the fact that Matter-as the process is viewed in the Natural Order-originally impresses or impregnates Mind, as it will be shown elsewhere that the Female primarily influxes and excites the Male,-by a Species of Spiritual Impregnation.
46. A very worthy contribution to tho Progress and Systematization of Philosophy has just been made in England, by David Masson, in a small work entitled, "Recent British Philosophy." The especial value of the work centers on tho important discrimination which the author institutes between, 1. The Cosmological Conception; 2. The Psychological Difference; and, 3. The Ontological Faitit of different Philosophers and Schools of Philosophy. This is precisely in the nature of what I mean, still more largely, by The Different Aspects of, or the Different Modes of Aspectivg any subject. The
recognition and elucidation of these distinctions will forward, almost more than anything else, the Ultimate Reconciliation of Doctrines. Writers suppose them selves discussing the same thing when in fact they are viewing the Subject from different stand-points, or at different planes of elevation; and that difference is often the whole source of their divergence, when otherwise they would agree. The remark is by no means new, but it has not practically received the necessary applications.
47. Let me illustrate from physical questions. Let the enquiry be made, whether there is actually any Up or any Down? If one of the parties attempting to answer the question goes radically (ontologically) into the investigation of it, and transports himself, in imagination, out into Blank or Pure Space, where there are no Planets and no objects whatsoever, he will bring back the answer that there is no such discrimination, really, (absolutely), as Up and Down. If another confines his attention to the Ordinary Conditions of Being in the Universe as actually constituted, and as he is naturally positioned in it, he affirms that it is Up from the Center of the Earth in a Line passing through the head of the observer as he stands, out to the zenith. This may be taken by Analogy, as the Common Sense Theory, in the phrase of the Scotch School of Philosophy-so called in contradistinction from the German Transcendentalism, or more accurately, from the more Expansive and Negative Hindoo Philosophy.
48. But within the body of even this more homely and modest inquiry there arise difficulties and differences; for the Knowledge of Astronomy comes in to inform us that the Head of the Observer points at each succeeding instant to a different portion of the sky, and also that the earth occupies a different position in Space; and so the question is renewed again whether really any one of these directions is Up or

Down; or whether Up and Down are purely relative and contingent. Again, bringing in the direct antithesis between the Earth-Centre and the Sun-Centre taken as bases, the question is still further complicated. If the question be, on the other hand, restricted to the mere connection of the Planet's Centre and the Head (in the normal position) of the observer, we find always and uniformly, the important relation of Up and Down thoroughly well established, and it is indispensable in all practical senses to be recognized.
15. Now, there are in fact, here, just so many different questions before the mind, -all covered, however, by the same one form of the question, Is there any Up or Down? To discuss the subject at all, therefore, there should be a Preliminary Work of Exhaustive Discrimination in respect to the questions themselves. If this were sufficiently accomplished, instead of being, as is usually the case, almost wholly neglected, it would generally be found that nothing remained to discuss, and that all parties would agree upon the answer to be given to each question thus clearly individualized and discriminated. This is a kind of labor which has received but little systematic attention heretofore, and which can only be radically performed by the aid of Scientific Analogy. Such writers as Cousin and Sir William Hamilton make many such distinctions incidentally, and from a natural tendency to lucidity of Style ; but Mr. Masson's invaluable Discrimination, above alluded to, is more completely thought-out as one of the essential conditions for putting an end to controversy. Universology will immensely expand the scope of such Preliminary Elucidations, as the Condition precedent of all profitable discussion; and it will wonderfully appear, that, so soon as two people wholly know what each is talking about, they tend inevitably towards agreement in the place of dissension. The simplicity of mathe
matical statement is farorable to this mutual understanding, and to its greater certainty, Relationally, as between difFERENT MINDS. Labors like those of Mr. Masson are, therefore, directly in the line of the Reconcillative Harmony of Ideas.
16. As, in Music, the Key in which the Musical Performance is to be pitched, is first to be determined, and as everything within the Performance is radically affected by this governing consideration, so it is of equal importance to know in what Key, or in other words, in what Range of Thought one is speaking or writing. It is especially, and in the first instance, of vital importance to know whether it is in the Key of time Ab olute or of the Relative that we are discoursing, inasmuch as, between these, there is a Natural Disharmony amounting to Antirhetical Reflexion or Polar Antagonism of Ideas.
17. The Substancive Resolution of All Things into their Primitive Elements by a Going-back (a Recursus) in TrMe, to their first conceivable condition (the conception modified by the indications of Observation, or Natural Science), is a Naturismal or Naturistic Procedure, in that Back-tending Direction, to Natural Origins or Primals in respect to the Evolution ; or to Natural Ultinates in respect to this Order and Kind of INvejtigation. The Evolution originates, and the re-gressive Investigation terminates, in the "Great Occan of Milk," the Primitive Ether infilling the otherwise Blank Space, of the Old Hindoo Philosophers; the "Proto-plasma" of Oken, or the "Primitive Milky Nebula" of Masson. This is, then, the Milk in the Breasts of " Mother Nature," from which the Young Creation, regarded as to its Historical Genesis, drew its carliest nutriment ; and this whole Evolution, "Experiential" [J. S. Mill], Empirical, Naturo-Historical and Historical, is characteristically and specifically, the Infanta - Feminoidal (Mother-and-Child)

Dispensation of Beingु, - Naturismal. 'the Analogy is seen when we recur to the Period of mere Absorption, the Sucking-and-Suckling Period, in the Evolution of the Individual Animal or Iluman Being. All Naturismal Theories go back, for their Origins of Things, to some such condition.
18. It is wholly difforent with the Sciento-Logical Analysis. This makes its recursus, not to a Primary Milky Emulsion of Matter, but to the Primitive Joining and Separation of Limits in the Constitution of Fonm; thus to Morpiic, in the place of Substancive, Elementary Conditions. This Mcthod accords, in part, with the Primitive Unition and Scparation of the Incisor Teeth (Iront-or-Cutting-Teeth) ranged upon the Jaws like two Kinives, in Closing upon the Morsel of Solicl Food, and in subscquently releasing it. These are the Unismal and Duismal, or Unifying and Separating Sides, factors, or aspects, of one Half of the Process of Chewing, which Half is collectively Unismal,-so characterized by its Initiation-as contrasted with the reemaining IIalf (Duismal) about to be characterized. This Methol accords, in other part, with the Cleft or Sepurated condition of the Morsel, as it is segmentized [a Duismal Aspect], in preparation for ultcrior plasmal unition with other substances [the Corresponding. Unismal Aspect], a unition which occurs in the mixed composition and preparation of the food.
19. The Closure and subsequent Opening of the Jaws [Unismal] and the Scctionizing and subsequent commingling of the Solid Lump of Food [Duismal], then combine in a larger Complex Unity of Operation, as viewed collectively or conjointly [Trinismal].
20. In the still larger vicw the whole Natural Process and Dispensation [Absorptional, Mother-and Child Relationship] is Unismal, and the whole Chewing, or properly so-called Eating-Process and Dispensation [Adultoid] is Duismal; and these are, in turn, the two factors of
the higher Trinism [or Combination of Unism and Duism]. This Discrimination then relates, by an exact correspondence, to the Immense and Radical Difference between Observational Generalizations (Unismal) and Aramitical Generalizations (Duismal), as subsequently developed in the Text (t. 1008).
21. So, then, the Observational and Naturalistic Solution of Being, allied with Natural Science, and the Empiricism or Experientialism of Mill in Philosophy, goes back, invariably, to a Primary Nebula, or to some Milky or Liquid Softness of Substance with its adaptation to early conditions, or to being moulded into organizations;"The Waters," upon which "the Spirit of God moved" in the act of creation (Gen. i. 2) ; while the Rational or Logical Solution of Being goes back as ineritably to the Cut-up of Matter or Substance, by the in-cis-ive interposition of Laucs, related to Cuts, Lines, or Limits, and hence to Out-line or Form, so corres. ponding with Mastication as contrasted with Sucking or Imbioing;-very different Origins truiy. The Ultimate of this latter solution is reached and found, as will be demonstrated in the whole body of the Text of the present work, in the two Primordial Principles Usism and DUISM.
22. It is precisely the same in respect to the Elements of Krowing as it is in respect to the Elements of Being. These are traced back by one set of Philosophers, as recently by Mr. Mill, wholly to a Proto-plasma of mere Undiscriminated Sensations and Consciousness, which, in one of its aspects, has been aptly denominated by Mr. Masson-in his rery pertinent Review of Mill's Reriew of Hamilton-a " certain curdling" of Phenomena definable simply as Feelings (1). The "curdling" carries us back, as before, to the idea of Milkiness,
or to the turbidity of the Primitive Waters. This recur'sus belongs to Experientialism, or to the Historical Erolution of Things in Time ; Time and Eventuation or Succession in Time being Feminoid, as contrasted with Space and Geometrical Segmentation (or Discrimination) as Masculoid. Periodicity is the grand Feminoidal Insignium, and the Premonition of Maternity. Mensual (Lat. mensis, A Month), Mcnstrual, relating to Periodicity, and Mensural, relating to Measuring, as of Time into Periods, are cognate words. Current or cursive reasoning (mens, MLID) is predominantly the Feminine Mode of Thought. Eren Rcason is a word having primitively the same cursicencss of meaning; while Exact Discrimination is the more Masculine Type of Mentation.
23. The latter set of Philosophers gu back for the Origins of Knowing to Primary Discriminations of the Forms of Thought; Categories, Laws of Association, etc. These are Transcendentalists, not merely nor chiefly in the Popular meaning (Emersonian) of that word, but in the German Philosophical Sense. Erery thing originates with them in the Laws which give Form to the Giren Substance, and which are, therefore, logically prior to the Substance. This Exact rariety of Transcendentalism is then the Analogue of Cherring-the chewing or " chopping" of Logic.
24. It will naturally occur that Chew. ing is later in fact, in the derelopment of the Individual Economr, than Suck ing, and so, the contest for priority scems, at first blush, to be settled, by Analogy, in faror of the Sucking-process: in faror, in other words, of Experientialism orer Transcendentalism. But, on reflection, the Atomic Analysis and Syn. thesis (chemical, for instance), of any Substance, as of the Primitire Milk, is seen to inrolve, in a finer sense, the whole Process of Chewing or Eating.

[^22]This again seems by its differentiative capacity to antedate Substance itself, upon which it operates. We talk of the Chemical Process of Oxidation, for example, as of a Corroding or eating; and so all Substance has in it a Form-al Schema and Process which is logically prior to itself, inasmuch as the Substance could not be, without it as the condition of its Being. And so the strife is renewed in the more secret recesses of Being. We find ourselves face to face, again, with the problem of the Egg and the Chicken.
20. Mr. Masson thus brilliantly states the case in summing up, as between Empiricism ("Experientialism") and Transcendentalism:
26. "Deliberately I have brought the question between Empiricism and Transcendentalism to this pass, knowing what will be said. 'What is the mighty difference,' it will be said, 'between Empiricism and Transcendentalism, if this is Transcendentalism? Would Empiricism deny aught of what you have here called in Transcendentalism to maintain? If it is the sole difference between Transcendentalism and Empiricism that the one maintains that in every thing, or process, there is an a priori or inherited element, necessarily assisting to determine what shall be the history of the thing or the result of the process, while the other maintains that this also, on our mounting higher in the evolution, may be resolved into experience-if this is all, is it not only the old story of looking at the gold-and-silver shield from opposite sides, and pronouncing it golden or silver according to the side looked at?' Not so ; I cannot think that it is so. Send Transcendentalism and Empiricism back, tugging with each other on the very terms described, through all stages of the evolution from the present moment, and at every' stage Transcendentalism is the
mode of thought that kecps the field, while Empiricism must still be the fugitive. That is something. And at the utmost, when the Nebula, or whatever else may be deemed primordial and homogeneous in the phenomenal evolution, is reached and rushed through by the two combatants, the pursued and the pursuing, is there not a mighty consequence in the ultimate victory? If Empiricism, fugitive till then, can then turn at bay and conquer, it can only be because its back is against Zero, against Nihilism, against a wall of absolute blackness. If Transcendentalism is still courageous and sure of the victory, it can only be because it sees in the middle of the wall of blackness a blazing gate, and knows it to be the gate whence the chariots issued and issue of an eternal a priori. And here perspective is as nothing. Wher ever we stand, it is either the wall of absolute blackness that terminates our riew, or the blazing gate shoots its radiance to where we are and move." (1).
27. Mr. Spencer has (at times, at least) rightly if not radically apprehended the Twofold Order of Evolution, from the stand-point of Mind and from that of Matter, respectively. His doctrine is, as stated, in summary, by his disciple, Prof. Youmans; That "Mind and Matter are alike inscrutable in their ultimate natures;" are manifestations of Something unknown: "are manifestations of the same Unknown, and are made to seem different to us by belonging, the one set to our Consciousness, and the other set to Existence out of our Consciousness." (2). Had this distinguished philosopher more radically comprehended this Dualism in the fountain of Legitimate Philosophy, he would have abstained, while elaborating his own Developmental Theory, frons depreciating, from indeed almost throwing contempt
(1) "Recent British Philosophy," pp. 315, 317.
(2) Christian Examiner (New York), March, 1S67, p. 216. Article: Herbert Spencer and his Reviewers, by E L. Youmans.
upon, the Subjective Method of Hegel (1). He would have sought, instead, rightly to penetrate the real Significance and Uses of each Method, and to have learned how to integrate them instead of merely sulstituting the one for the other. This last is a procedure which pronounces the Partialism and Insufficiency of his own System. The Logic of his own Premises, above stated, would be that there must exist two Orders of Evolution in the Universe, one taking its departure from Mind and Pure "Ideas," or from "Thought" itself, and the other from "the Things thought of" (2).
28. If, then, the System evolved from the pursuit of one of these Orders is inadequate to do the work of the other, the Integral Philosopher will inquire, First, What is the nature and value of the work which it does accomplish, or may accomplish, when perfected; and what, in the next place, is the Correlative and Reconciliative Harmony of the two Systems? The Abstract Mathematics deal in Considerations logically evolved from Necessary or Axiomatic Premises, millions of which Considerations never find any practical applications in the Actual World of "Things thought of." Does it follow that the Mathematics are, for that reason, absurd and useless, or that they must be abolished or discarded as a Method of investigation of the truth ; or even that They are not of Infinite, and of the Governing Importance, within this very Domain of "Things thought of." Hickok has admirably discriminated between the two Domains of Principles and Facts (a. 1-7, t. 198, p. 136). To attempt to make Mathematics stand in the place of Natural History, would indeed be an error; but to exclude the Mathematics from Natural History would certainly bo not the less so.
29. Led and authorized by such appre-
ciation as Mr. Spencer has actually exhibited of the Dualism in question, Prof. Youmans proceeds in the Article just quoted from (3), to say that " He (Mr. Spencer) has been, ever since he commenced publishing, an Antagonist of Pure Empiricism. The Antagonism was displayed in his first work, 'Social Statics.' It was still more definitely displayed in his ' Principles of Psychology,' where, in his doctrine of the 'Universal Postulate' [Force] he contended, in opposition to Mr. Mill, that certain trutlis must be accepted as necessary. The Controversy between the two, pending since that time, has been recently revived. In the 'Fornnightly Review' for July 15, 1865, Mr. Spencer re-asserted and reenforced the pasition he had before taken, that, even supposing all Knowledge to be interpretable as having originated in experience, there are nevertheless certain truths which must be accepted as à priori, before the interpretation becomes possible." It is probably somewhere within the implication of this last sentence that Mr. Spencer would find for himself, although it is not obvious, the reconciliation between positions like those here assigned to him, and other. explicit averments of his doctrine, in which he seems to adopt the very words of Mr. Mill in the precise meaning which Mr. Mill assigns to them; for example, as follows: In his Criticism of the Classification of the Sciences by Oken, [allied to Hegel], Mr. Spencer observes: "It will not be thought worthy of much consideration by those who, like curselves, hold that Experience is the sole origin of Knowledge." (4).
30. Mr. Spencer makes, in the same Treatise quoted from abore, an admir able discrimination between the Qualitative and the Quantitative Development of Science ; and wisely shows that the Qualitative is an earlier or preced-

[^23]ing stage [Infantoid], as compared with the Quantitative, which is later and riper [Adultoid]. It is this same Discrimination enlarged in application, which exists as betwreen the Naturo-Metaphysic extending up to and including Hegelianism, as the Spirit of Nature,-Qualitatice, and Sciento-Philosophy developed in Universology, as the Spirit of Science, Quantitative [Adultoid] (Typical Table the Universe, No. 7, t. 40; t. 111). Quality is again allied with Substynce, and Quantity with Form. (a. 19, c. 32, t. 136). Substance is again, by Analogy, Monospheric and Form Comparative (t. 0000).
29. The following are the most pregnant extracts from Spencer upon this Subject: "As we pass from Qualitative to Quantitative Prevision we pass from Inductive Science to Deductive Sciencs. Science while purely Inductive is purely QuaTitative ; when inaccurately Quantitative it usually consists of part Induction and part Deduction; and it becomes accuratively Quantitative only when wholly Deductive. We do not mean that the Deduction and the Quantitative are co-extensive ; for there is manifestly much Deduction that is Qualitative only." [Inexpugnability and Overlappisc]. "We mean that all Quantitative Prevision is reached Deductively; and that Induction can achieve only Qualitative Prevision." (1).
30. "Moreover it must be borne in mind not only that all the Sciences are Qualitative in their First Stages" [In-fancy]-" not only that some of them, as Chemistry, have but recently reached the Quantitative Stage-but that the most advanced Sciences have attained to their present power of determining Quantities not present to the senses, or not directly measurable, by a slow process of improvement extending through thousands of years." (2).
31. Qualitative and Quantitative are
recognized above (a. 28, c. 32, t. 136), as Infantoid and Adultoid, respectively (c. 24, t. 136). This was done, however, provisionally, and as true only by an Echo of Analogy. Really and radically all the Quantitative Science nowo known ( prior to Universological bases), though Deductive in a sense, is so only in a fragmentary way;-not as Absolute Deduction from a priori Principles of Cniverscl Application. Hence it also, in its totality, is only an Adultoid phase of the Infantismus of Science, and does not pertain at all to the Proper Adultismus of Human Knowledge. It is, in turn, a Subdominant Deductire or Deductionoid Domain of the Inductionismus, in the same manner as the Inductionismus entire is a Subdominant Domain of the Proto-Societismus, as shown abore (c. 42, t. 136).
32. It is not, in other words, Quantity, eren with all its External Exactness, which is the true Fountain of Universal Deduction; but the Spirit of Quantity in the Universal Logic; the Metaphysics of the Mathematics; the Common Fountain of Sciento-Plilosophy. This is then allied with Mind ; with the Logical ORDER; with a more rigorous a priori than that of Hegel even; and with the true, and at this day incipient, Universological Development of Human Knowledge ; - destined to be reached after the Inductive Career, though foreshadowed, prior to it, by the Kantean and Hegelian Metaphysic and Logic.
33. Obviously then the criticism of Prof. Youmans, in which he is joined by the Positivists generally, of the Doctrine that " Unity must be found in the Equipoise and Dynamic Correlation of Being and Thought, which are welded into one in the act of Knowle'ge itself," loses its point, as against the New Metaphysic. "Pray," he sark "what Unification of Fragmentary Kinovledges
has ever been accompiished by that Method carried still higher, is the Anrecipe?"一"The old file at which Meta- swer which Universology proposes to physicians have been gnawing these thousands of years; and which will probably continue as sharp as at first, so long as this species of mental enterprise continues." (1). As rightly ask depreciatingly ; what Manly work did the infant ever accomplish? The Exact, basic Unification of All Knowledge, through this
offer to this inquiry.

36: It is by Anticipation that these Abstrusities have been introduced here. The Subjects need not be deeply considered by the reader or student, as yet. Their Ultimate and Complete Solution will depend upon the treatment of the theme of the Text.
(1) Christian Examiner, March, 1867, p. 206.

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137. It has been gradually becoming obrious, in the course of the two preceding chapters, that there must be some FUNDAmental distribution of Ideas, or Principles, or Entities, which underlies all Special Distributions, and which has in itself the power of unifying or integrating them all; some Unitary Law, under which All Sciences and All Branches of Knowledge shall be arranged and shown to have CERTAIN Definite Relations to each other. Such Governing Principle, or Grand Serial Laro of Distribution, must be found to apply, not singly, to the Mind, or to Society, or to Language, or to Music, or to any one of the Single Departments or Domains of the Universe, but to the entire World, or to the Universe itself, as well as to each smaller Department of the Universe, and so to form, in its ulterior development, a veritable UNIVERSOLOGY, or SCIENCE OF THE UNIVERSE.
138. Taking our departure again from the Sphere of Mind, let us recall the distribution of it by the Metaphysicians into 1. Knowing ; 2. Feeling ; 3. Conation (The Will). Fourier has furnished a corresponding Cosmical Distribution of what he regards as the Principles of Being, which is far more com-
prehensive than that which Comte derives, as we have already seen, Sociologically, from the same Metaphysical Principles. The following is the distribution of Fourier:
3. Spirit ; The Active and Motic (or Moving) Principle.
2. Matter ; The Passive and Moved Principle.

1. Mathematics ; The Neuter and Regulative Principle. The Total Human Being, not the Mind alone, is then composed, according to him, of Three Corresponding so-called Principles, as shown below:
2. The Passions. Active and Motor Principle.
3. The Body. Passive and Moved Principle.
4. Intelligence. Neuter and Regulative Principle.

The following Table will present these several distributions in their striking and important parallelism with each other.

TABLE 9 。
The Metaphysicians. Fourier-The World. Fourier-Man.
3. Conation.
3. Spirit.
3. The Passions.
2. Feeling. 2. Matter.

1. Knowirg. 1. Mathematics.
2. The Body (Senses).
3. The Irielligence.

To these are to be added Comte's Distribution of the Elements of Humanity in Society, as follows:
3. Action. (Dynamique.)
2. Affection or Sentiment.

1. Intelligence.
2. Swedenborg, omitting the Body and the merely sensuous part of the Mind, which repeats the Body within the Mind-the Senses-had, contemporaneously with Kant, distributed the whole Mind, not in a Threefold, but in a Twofold manner, thus:

$$
\begin{array}{ll}
\text { 2. } \Gamma^{\mathrm{h}}: \text { Will, } & \text { (= Conation). } \\
\text { 1. The Understanding, } & \text { (= Knowing). }
\end{array}
$$

But he accompanies this with another Twofold distribution, into 1. Love, and 2. Wisdon, as previously noticed, which he regards as substantially identical with the former-Love and The Will coinciding or being, according to him, virtually

Synonymous; and so of Wisdom and the Understanding. It is obvious enough, however, that the "Love" of Swedenborg is the "Feeling" of Kant. It is confounded with The Will, only as Extremes meet, and in accordance with a certain intimate relation which will be hereafter explained as existing between them as the two Extremes of the Natural Scale of these Faculties. The following addition to the Table will then introduce the Harmony of this distribution with the others above exhibited :

> Kant.

Sicedenborg.
3. Conation $\left\{\begin{array}{l}\text { Will (Determina- } \\ \text { Desire. [tion). }\end{array}\right.$
2. Knowivg.

1. Feeling.
2. The Understanding-

It is the latter Order, in which Feeling is numbered One (1), and Knowing Two (2), which is the Natural Order. The Reverse Order (1. Knowing, 2. Feeling)-so employed instinctively by the Metaphysicians, because they are Logicians -is The Logical Order ( t . 28). The One (1) and the Three (3) of the Natural Order, are intimately related and easily confounded with each other. This is the point which, as I have just said, will be explained farther on. Hence Swedenborg has, by a natural tendency, but yet somewhat erroneously, treated Love and the Will as virtual Equivalents. (t. 890). c. 1, 2.

Commentary t. 13.9. 1. The subsequent explanations of the Confluent Tendency of "Love" and "Will" (Feeling and Conation) promised in the Text, relate to the Sympathy existing between the Number One (1) and the Number Three (3), as both of them Odd Numbers, as beginning and terminating each Natural Trigrade Scale, and as conjointly contrasted with the Middle Term, the Typical Eren Number Two (2). Without awaiting, however, this more technical Exposition ( $\mathbf{t}$ 898), it will throw light on the subject to observe here that "Love," as an Emotion, is Feeling in its finer essence, and so stands representatively for that whole Department of Mind, down to the Senses and the most external and fleshly lusts, on the one hand, while on the other it ascends, at the other extreme of the Scale of Mind, to the highest Sanctities of the Soul, mingling with the Will, and becoming, as it were, one with it.
140. The largest or most truly Cosmical of these Distributions is that of Fourier relating to the World. By the term Mathematics he intends far more than the Calculus. He means to signify all that the Old Greek Philosopher means when he affirms that "God geometrizes"; all that the Metaphysician means by the Logic of Being ; and vaguely, in addition, all that I intend specifically by Sciento-Philosophy. This is Form, in the large sense of that term (t. 111), impressed upon Matter as the Substance of Being. Forms (of Thought) are again Ideas. The Greek word eidos, whence we have the word idea, meant originally Form, and nothing more.
141. This idea-called here Mathematics-is manifestly an extension of Knowing, Intelligence, or Ideas, the ordinary attributions of Mind, into the Universe at large, in the sense of being, not then the same thing indeed as Knowing, but a Correspondential Principle, Element, or Attribute, in the Universe at large, the other and larger Domain. It is an Analogue or Type, that is to say, of Knovoledge or Intelligence, inasmuch as it (the Mathematics) is The Forn-ative and Regulative Element of Uni-
2. While, therefore, the discriminations of Swedenborg are somewhat less accurate than that of Kant, they embody the Spirit of the whole truth of the Subject, and furnish even a broader Generalization,-reducing the Mind to a twofold instead of a threefold First Division; but the threefold distribution of Mind is restored by Swedenborg in what he denominates the Natural, the Spiritual and the Celestial States or Degrees of the Mind, respectively; and Tulk, the boldest and most original of the Commentators on Swedenborg, incidentally restores the harmony of Swedenborg with Kant, when instead of Love and Wisdom, or the Will and the Understanding, he discriminates

1. Tife Senses, 2. The Intellect, and 3. Tie Will.

The following (Commentated) Epitome of Spencer's Distribution, or Modification rather of the Kantean Distribution of the Mental Constituents will help to coördinate these several Classifications:
3. Volition (Will, Conation).
2. Cognition (Understanding, Knowing, Wisdom).

1. Feeling
$\left\{\begin{array}{l}\text { Emotions (Love, etc.) } \\ \text { Sensations (The Senses). (1). }\end{array}\right.$
(1) Review of Bain on the Emotions and tho Will. Illustrations of Universal Progress, p. 320.
versal Being, precisely as Knowing is the Form-ative and Regulative Element of Mind.
2. In the same manner, Matter [Substance] is the Cosmical Analogue, within the World of Feeling, or of "Love" as this term is used by Swedenborg, within the Mind, and finally, Action, or Spirit, as the Active Element of Universal Being, is the Cosmical Analogue of Conation-Will and Desirein the Mind. Conation is from the Latin conari, to put forth EXERTIONS, TO ENDEAVOR TO ACT.
3. In other words, Mathematics is the Form, and Matter the Substance [or Material] of Universal Being ; and Spirit, producing Action or Movement, is the indwelling reality of Existence which is the resultant of the two Elementary Fac-tors-the Form and the Substance; precisely in the same manner as Knowing, or Intelligence, is the Form-Element, as Feeling, Affection, or "Love," is the Substance-Element, within the Mind, and as Will is the indwelling reality or personality of that Mental Existence which manifests itself in the Exertions and Movements of the Mind. This Echo or Correspondence in different Domains is what is meant by Analogy. c. 1-8.

Commentary t. 143. 1. The observant reader will notice that Spirit is here put as representative of Movement, while yet $S$ pirit is itself represented by the Breath (and the Atmosphere), as heretofore shown (c. 8, t. 9), and while the Right-hand has been given as the representative of Movement and Power (t. 42)-in the Constitution of the Individual Human Body.
2. The relation of these different emblems is this: The Breath is uttered or thrown out, and hits or acts upon objects, as well as the Hand. The Breath or the Wind (the Moving Air, Spiritoid blows; and the hand gives a blow. CChrist said, "The wind bloweth where it listeth, and ye hear the sound thereof, but ye cannot tell whence it cometh, nor whither it goeth ; so is every one that is born of the Spirit"; that is to say, so is the action of the Spirit upon him. To utter the Sounding Breath, which is the Voice, forcibly, is to bawol, which despite the orthography is the same word as ball, the ordinary missile or thing sent, and made to do execution, and so to express Action.
3. The Breath, as Speech-Utterance, is then, one, and a higher and finer representation of Movement than the Hand, though not, for the same reason, so obvious and basic a type. The one may therefore be put for the other. Besides, the flash of vital energy along the nerves, in putting the hand in move-
144. In this manner, therefore, an Analogy is established between the Mind, with its threefold Subdivision above the Common Consciousness, and the Universe at large, with its threefold Subdivision, above the Common Chaos in which all Elements are confusedly combined. The Common Consciousness in the Mind and the Chaotic Aggregation of the Elements in the World at large again repeat each other analogically. (Tab. 3, t. 27).
ment, is again most naturally and primitively conceived of as an Atmospheric Current so directed; as when we speak of a Spirited Blow, or of a Spirited Action. Later, or when more scientifically aided in the Selection of our Analogues, we assimilate the motic nerve-energy to a current of Electricity; but this is only, popularly considered, a finer essence of the Air.
4. It results from this explanation that all the Members of the body are, in turn, and in some degree, emblematic of Spirit, and of Morement, respectively; Also Function and Gesture are so (t. 44) ; but the Right Fand and the Breath are pre-eminently so. This is the Principle of Mere Preponderance (t.526).
5. By attention to the Typical Tableau (Dia. 2, t. 41) it will be seen that the word Action is interposed between the Hand armed for Execution, and the Breath. It has its application, as may now be understood, to either, or to both.
6. It is indeed only in the Primitive or Naturismal Aspect of the Subject that it is the Right Hand, rather than the Left, which represents Action. In the Natural or Untrained Condition of the body the Man rests upon the Left Foot, as his Pirot of Position, and deals his blowo with the Right Hand or Fist. All this is reversed, in "Scientific" Boxing, in which the bloro is dealt with the Left Hand. This is the Terminal Contersion nto Opposites (t. 83) which occurs in passing from Naturism to Scientism, or from the Naturismus to the Scientismus (c. 3, 4, t. 43)-that is to say, in this case, from an Untrained Condition ints and under the Exact Laws of Training. Natural Aspects govern, howerer, in a Primary Presentation of a subject.
7. As Spirit is involved in Action, and as the Breath accordingly accompanies the Hand in the Symbolic Representation of Movement as unirersally con-sidered-justifying this Intuition of Fourier; so the Mathematics (Mathesis) accompanies the Featuring of the Head and Face (Compare Lat. Forma, Form: and Form-ositas, Beauty-depending on the Features), and also the Anatomical Cut-up of the Body in the Symbolism of Formi; and, finallr, Matter accompanies the Blood, Plasmas, and Substances of the body, in the Symbolism of Substaice. Pus has been instinctively named "Matter." (t. 42).
8. The Number Two (2) is the virtual Basis of the whole of Mathematics. Some Arithmeticians refuse to consider One (1) as a Number. More properly speaking, it is not a Sum. Two (2), the First Sum, is the simplest Form of Division, its included Units being divided even before it is a Sum; and Division by Thought-Lines or Real Lines, is the Essence of Form. Two (2) is ta Forms what One (1) is to Scbstance.

The following Table is a resumé (and in a sense, a corrective) of the preceding Discriminations, and will add a new degree of lucidity to our examination of the Subject.

TABLE 10 . c. 1-10.
UNIVERSAL BEING.
[Elaborated.] (t. 145.)

145. Hence it results that a more Fundamental Distribution of Universal Being-prior to all that has been stated or shown-is into Three Sets of Discrimination, cutting each

Commentary t. 144, 145. 1. Language is a Mirror and Type of the Universe, and is itself an Echoing or Corresponतing Universe,-in such a sense that the Grammatical Analysis and Distribution of Language is a perfect Guide and Model for the larger Analysis and Distribution such as that which we are now instituting of the Entire Universe. Universology is, in other words, the Grammar of the Universe, or the Key to its Construction.
2. In the Radical Analysis of Language, Matter is represented by the Body of Speech, or by the Sounds and Words of which Language is composed, irrespective of their Meaning-as when we hear an Unknown Tongue. Universal Mind is then represented by the Meaning, Sense, Ideas, in other words, by the special quantum of Mrxd conveyed by this Body of Speech; as for instance, in the definitions of the words. This is, then, the Matter-and-Mind Discrimination in Language corresponding with the same Discrimination in respect to the Universe at large, the Matter and Mind of the Table in the Text.
3. The nther Distribution (Secondary) into Substance and Form finds, in the Domain of Language, its Analogue in the Parts of Speech, thus:
other as it were at Right Angles, or each bisecting all the others, as shown in the following Table. c. 1-11.

## TABLE 11. c. 1-10

## I. THE ELABORISMUS.



## II. THE ELEMENTISMUS.

146. Let us endearor, before proceeding farther, to obtain a clearer understanding of what is really meant by Aralogy, as that term is now about to be applied as a new Element of Science-the basic Element in fine of All Science when Science shall be rightly conceired or apprehended.

Substance is represented by Scbstantires together with the Substantive Verb (то вe). These, or the Corresponding Things and Beings in the Real Universe, are Substantoids (or Substantiroids), and their Domain is the Substantisiots. Form, on the other hand, is represented somewhat variously, by all the Remaining Parts of Speech-Adjectives, Prepositions, Conjunctions, etc.-except the Participles, and the Ferbs denoting Morement (in Tense or Time) compounded of Participles and the Substantire Terb. Adjjectices correspond with the Faces, Factts, Aspects or Reflects of Objects or Things in the Real Forld ; Prepositions with their Connections or Relations, etc. These are conjointly the Condrtionords or Morphoids of Being, and their Domain is the Conditionisyus or Morphismus.
4. Finally, Participiuls hare relation to Morement, as Substantives hare to Stbstance, and Adjectives, etc., to Form. These, in turn, subdivide into 1. Lnfinttives (Verbs in the Infinitive Mode), which are Substantiroidal, or repetitive of Substantires; and 2. Participles proper, which are Adjecticoidal,
147. Analogy, in a less precise, semi-poetical sense, is extensively recognized in the writings of the Past. Among the Mystics and Rhapsodists especially it has taken a leading position; but it has failed hitherto to become scientific. It has suggested Everything, but has really explained Nothing. With Fourier, who is still a Mystic, and with Oken, the celebrated German Physio-Philosopher, it has made magnificent promises, and a certain approximation to the Scientific character. With them, however, it was destined to be far more disappointing than satisfactory. Fourier has made no impression upon the Scientific World ; Oken has lost the hold which he gained, and his method even has lost its repute.
148. As the brilliant Kaleidoscope of Thought and Imagination among great minds, but in the very opposite of the Scientific Spirit, Analogy is thus described by Emerson:
"Herein is especially apprehended the Unity of Naturethe unity in variety-which meets us everywhere. All the endless rariety of things make an identical impression. Xeno-
or repetitive of Adjectives. These last may stand apart, like Adjectives, or combined with the Copula (Substantive Verb), may appear as Finite Verbs. For this Subdivision of Participials, see Kühner's Greek Grammars.
5. The Participles and all Verbs implring Movement, correspond, then, with Movement, and hence their Analogous Movements in Real Being are Motoids; while Substantoids and Adjectoids (or rather All Stato-Conditionoids) are Starords; (or correspond with Station or Rest, and hence with Space, in the place of Time).
6. These important and crucial Analogies between the Grand Inclusive and Exhaustive Distribution of the Total Universe, such as Universology institutes, and the established Distributions of Language, are resumed and more extensively treated in the Last Chapter of the "Structural Outline," which is chiefly occupied with Lingual Considerations. They will be wrought out still more in detail in other works, and will be found exceedingly interesting and instructive. It would be premature to insist upon them, or thoroughly to expand them at this point. The penetrating mind of the reader may, however, perceive even at this early stage of the investigation, that we have a CANON OF CRITICISMI upon all our reasonings so soon as we can establish a Complete Parallelism betreen the Distribution of the Universe at large, and that of any given one of its Departments or Subordinate Domains, as that of Language, for example. With the acquisition of such a test we pass over from the Vagueness of Philosophoid Speculations to the Certainty of Scientific Investigation and Research.
phanes complained in his old age that, look where he would, all things hastened back to Unity. He was weary of seeing the same entity in the tedious variety of forms. The fable of Proteus has a cordial truth. A leaf, a drop, a crystal, a moment of time, is related to the whole, and partakes of the perfection of the whole. Each particle is a microcosm, and faithfully renders the likeness of the world.
149. "Not only resemblances exist in things whose analogy is obvious, as when we detect the type of the human hand in the flipper of the fossil saurus, but also in objects wherein there is great superficial unlikeness. Thus architecture is called 'frozen music' by De Stael and Goethe. Vitruvius thought an architect should be a musician. 'A Gothic church,' said Coleridge, 'is a petrified religion.' Michael Angelo maintained that, to an architect, a knowledge of anatomy is essential. In Haydn's Oratorios, the notes present to the imagination not only motions, as, of the snake, the stag, and the elephant, but colors also; as the green grass. The
7. It appears from what precedes that in strictness, the Compound Resultant of Matter-and-Mind is not Movement, but Existence ( $\mathbf{t}$. 26),-the Static and not the Motic Aspect of Real Being. It is Substance-and-Form, on the contrary, which yield Movement as their Product; Substance being Inert or Statoid, but Form always implying or, indeed, causing Motion, from the subtle fact that it is primarily Di-visionoid, and hence Di-remptive, and hence Incipient of Movement, or, in other words, essentially Causative or Causal in its nature. There is here one of the most important arcana of the Universe, and one which will demand a radical investigation at numerous points in the more extended exposition of Universology. The current Tri-grade Scale, 1. Matter, 2. Mind, 3. Movement is, therefore, an Abridgment by election and Condensation from two such Distributions. (t. 26).
8. Station (or Rest), the Content of Space, which is in turn its Continent, Matrix, Medium, or Container, and Motion, the Content of Time, which is in turn ITs Continent, give, as their Compound Resultant or Joint Product, the Concrete Totality of Universal Being. We must still reserve, howerer, the Consideration of the Existence of a Spiritual (Real) World; (Pncumatology, t. 39). This, in a sense, transcends, it is claimed, the Space-and-Time Existence of the External Universe, while yet it is amenable, by Reflex Correspondence, it is admitted, to the Laws of Distribution manifested in Space and Time. See Swedenborg and Tulk for the Extremest Attenuation of this subtle Doctrine.
law of harmonic sounds reappears in the harmonic colors. The granite is differenced in its laws only by the more or less of heat from the river that wears it away. The river, as it flows, resembles the air that flows over it; the air resembles the light which traverses it with more subtile currents ; the light resembles the heat which rides with it through Space. Each Creature is only a modification of the other ; the likeness in them is more than the difference, and their radical law is one and the same. A rule of one art, or a law of one organization, holds true throughout nature. So intimate is this Unity, that, it is easily seen, it lies under the undermost garment of nature, and betrays its source in Universal Spirit. For it pervades Thought also. Every universal truth which we express in words, implies or supposes every other truth. Omne verum vero consonat. It is like a great circle or a sphere,
9. Finally, in Table 10 there is exhibited a still backlying Twofold Discrimination of the Universe into 1. The Elaborismus (Concretoid), and 2. The Elementisyus (Abstractoid). The Elementismus of Real Being consists of the Abstract and Ideal Principles of Being, and is another Realm which virtually Transcends Space and Time. This is the Domain of Transcendentalism. Vaguely and poetically treated, it furnishes the Platonic and Emersonian Type -Mystical Transcendentalism. Profoundly and analytically treated, but without the aid of any Canon of Criticism upon its own Speculative Processes, such as is furnished by the Discorery and Demonstration of Exact Analogy between the Distribution of the Whole and that of the Parts, it furnishes the Kantean and Hegelian Type-Metaphysical Transcendentalism. With this neody discovered Test of Scientific Exactitude and Verity, it furnishes the type herein exhibited-Sciento-Philosophic or Untrersological Transcendentalism.
10. The Order of Presentation is here naturally The Logical One ; so that the Elementismus, though numbered II., stands, still, at the bottom of the Table (Dia. 10), as the Basis or Foundation of the Whole (t. 28). Hence it is that the Transcendental Domain, and especially that of Sciento-Philosophy, will be also spoken of at times as Sub-transcendental.
11. The Corresponding Elementismus, and Primitive Basis of Language, or of the Lingual Universe, consists, as the intelligent reader will now readily recognize, of the Analyzed Elements of Speech, the Realm occupied by Orthography based on the Alphabet (the Schedule of Elements) ; by Phonetics or Phonology, the Rigorous Analysis of Sounds; by Etrmology; by the New Science of Comparative Philology by Syllabic Measure or Meter, etc. These hints must suffice for the present.
comprising all possible circles; which, however, may be drawn and comprise it in like manner. Every such truth is the absolute End seen from one side. But it has innumerable sides.
150. "The central Unity is still more conspicuous in actions. Words are finite organs of the infinite mind. They cannot cover the dimensions of what is in truth. They break, chop and impoverish it. An action is the perfection and publication of thought. A right action seems to fill the eye, and to be related to all nature. 'The wise man in doing one thing does all, or in the one thing he does rightly, he sees the likeness of all which is done rightly.' " (1).
151. The school of Fourier-who was himself intuitively searching out after a New and Complete Scientific Method, but with no just appreciation of the rigorous demands of Sciencehas presented the idea of Analogy, with some increased tendency to Scientific accuracy, as follows:
"The term Analogy is one of those to which Fourier has. given a particular signification, which we will endeavor to make comprehended.
"Two Homogeneous quantities, two things of the same nature, may be placed in relation with each other ; it is possible to compare them, and to find between them a common mean or measure.
" Are there, as between Heterogeneous things, also, Points of Contact, and possible relations?
"To this question Science would be greatly tempted to answer, No; but for a very long period the instinct of the masses has responded in the Affirmative.
"All languages have words which have first a proper, and then a figurative sense ; that is to say, they apply equally well to things of different Orders ; to Physical Properties, and to Moral Properties, for example.
"Thus the Adjective hard, in its proper sense, expresses a Physical Property of Solids; as, a hard body.

[^24]"The same Adjective, in its figurative sense, expresses an accidental vice of the Soul ; as, a hard character.
"Why are there, thus, real relations, independent of anything conventional, between physical properties and moral qualities; why is there in physical hardness something which corresponds to moral hardness ? This correspondence does not originate in chance, nor in habit; and every one knows that it would be absurd to try to awaken the idea of the same moral quality by employing the opposite physical Adjective; by agreeing, for example, to call an inflexible man a soft (or mild) character; the adjective soft retaining all the time, its own proper sense, that which it has in the expression, a soft body.
"There are then real or true relations as between things which are heterogeneous. These relations, very different in kind from those which exist between homogeneous things, are -denominated by Fourier Analogical Relations. Such is then the meaning we shall give to the word Analogy." (1).
152. Swedenborg, with whom the term Correspondence is used in the place of Analogy, abounds in the exposition of this doctrine in his own peculiar Theological and Mystical way. The following extracts are a sample of his mode of thought upon the subject:
"It shall first be stated what Correspondence is. The whole natural world corresponds to the spiritual world; and not only the natural collectively, but also in its individual parts: wherefore every object in the natural world existing from something in the spiritual world, is called its correspondent." [Analogue]. "It is to be observed that the Natural World exists and subsists from the Spiritual World, just as the Effect exists from its Efficient Cause. All that is called the natural world, which lies below the Sun, and thence receives its Heat and Light; and all the objects which thence

[^25]subsist belong to that world: but the Spiritual World is Heaven:; and the objects of that world are all that are in the heavens." (1).
"The nature of correspondence may be seen from the face in man. In a countenance which has not been taught to dissemble, all the affections of the mind display themselves visibly, in a natural form, as in their type; whence the face is called the index of the mind. Thus man's Spiritual World shows itself in his Natural World. In the same manner, the Ideas of his Understanding reveal themselves in his Speech, and the Determinations of his Will in the Gestures of his Body. All things, therefore, which take effect in the body, whether in the countenance, the speech, or the gestures, are called Correspondexces." (2). a. 1-17.
153. Analogy, as I employ the term, embraces, clarifies, and explains all that is meant by these writers ; but in addition to all this it is an exact and measurable echo of Likeness, so far as the underlying Law of Distribution is concerned, be-

Annotation t. 152. 1. "It is unknown at this day what Correspondence is. This ignorance is owing to various causes; the chief of which is, that man has removed himself from heaven, through cherishing the love of self and of the world. For he that supremely loves himself and the world, cares only for worldly things, because they soothe the external senses, and are agreeable to his natural disposition ; but has no concern about spiritual things, because these only soothe the internal senses, and are agreeable to the internal or rational mind. These, therefore, they cast aside, saying, that they are too high for man's comprehension. Not so did the ancients. With them the Science of correspondences was the chief of all sciences; by means of its discoveries also they im-
bibed intelligence and wisdom; and such of them as bel gged to the church had by it communcation with heaven; for the science of correspondences is the science of angels. The most ancient people, who were celestial men, absolutely thought from correspondence, as do the angels; whence also they conversed with angels; and whence, likewise, the Lord often appeared to them, communicating instruction. But, at the present day, that science is so utterly lost, that it is even unknown what correspondence is." (3).
2. "Without an apprehension of what correspondence is, not anything can be clearly known respecting the Spiritual world ; nor respecting its influx into the natural world; nor, indeed, respecting what that which is spiritual is, com-
tween any two or more given Domains of Being, let their superficial differences be what they may. This may be illustrated by the fact that all the geometrical properties of a circle, including its radii, its concentric rings, and its related angles, would remain the same, (if it were symmetrically divided) ; and be the same, for all the different sectors and arcs of the circle, no matter with what diversity of coloring the surfaces of the different sectors might be overlaid. There would thus be an Exact Sorentific basis of Likeness underlying a superficial manifestation of numerous differences. Universology demonstrates that precisely such is the plan of the Universe, and that there is thus Unity of Law in the midst of an Infinite Variety of Manifestations. c. 1.
154. Emerson, speaking, in the Extract above, of what may be denominated the poetical appreciation of Analogy, says: "So intimate is this Unity, that it is easily seen," etc. On the contrary, Scientific and Exact Analogy is so recondite or

Commentary $t$. 153. 1. It has been the universal defect hitherto of all who have undertaken to treat of the subject of Atalogy or Correspondences, that they have sought for the manifestation of this principle in the Elaborated or Concrete World, or, as it were, in the top-branches of the tree of Existence. It is the peculiarity of Universology that it primarily verifies the existence of the Principle in the Elements (or Elementism) of Universal Being, and of the several Departments or Domains of Being, and then works up from this Elementary and Abstract Sphere to the Elaborate and Concrete Sphere of Being. To inquire or to affirm what is the meaning of the different animals or vegetables, for instance, before the existence of Analogy in Elements has been proven,
pared with that which is natural ; since also, nothing can be clearly known concerning the spirit of man, which is called the soul, and its operation upon the body ; nor yet concerning the state of man after death : * *" (1).
3. "Since man is both a heaven and a world in miniature, formed after the image of heaven and the world at large, he, also, has belonging to him both a
spiritual world and a natural world. The interiors, which belong to his mind, and have relation to his understanding and will, constitute his spiritual world ; but his exteriors, which belong to his body, and have reference to its senses and actions, constitute his natural world. Whatever, therefore, exists in his natural world, that is, in his body, with its senses and actions, by derivation from his spirit-

[^26]occult, so much the grand arcanum of Nature, that it is as it were the rery last of the Principles of Science to be discovered and demonstrated. Even when it is known, it is not easy to give a simple and convincing illustration of its truth and of its radical Scientific importance, in advance of the extended study of the subject. In respect to simplicity and elementary character the following illustration is perhaps the best.
155. There are two great Series of Numeration which we denominate 1. The Cardinal Numbers, as One (1), Two (2), Three (3), Four (4), Five (5), etc., on to infinity ; and 2. The Ordinal Numbers, First ( $\left.1^{\text {stt }}\right)$, Second $\left(2^{\text {nd }}\right)$, Third $\left(3^{\text {rd }}\right)$, Fourth $\left(4^{\text {th }}\right)$, Fifth ( $\left.5^{\text {th }}\right)$, etc., on to infinity. These have very different and distinctive meanings from each other; which is their superficial difference. Three (3), for example, means three Units collectively, or grouped into a joint body of numbers, which we hold in the mind at the same instant of time, or, as
is like studying Architecture by attending to the Individual Forms of Houses, instead of beginning with the Abstract Geometrical and other Mathematical Considerations. This is the Concrete and Unscientific method, and one which has ended in no result other than an Intuitional and Superficial perception of certain resemblances [Symbolism]. To inquire, on the contrary, what is the correspondence of the Elements of Number with the Elements of Form-of the numbers One and Two with the Ponst and Lnee, for instance,-where Pythagoras began to investigate-is the Abstract and Analytical Method which leads to positive demonstration, and to the full understanding of the subject scientifically.
ual world, that is, from his mind, with its understanding and will, is called its correspondent." (1).
4. "From these observations may also be seen what the internal man is, and what the external; or, that the internal is that which is called the spiritual man, and the external that which is called the natural man. Also, that the one is distinct from the other, as hearen is from
the world; and likewise, that all things which take effect, and exist, in the external or natural man, so take effect and exist from the internal or spiritual." (2).
5. "Thus much respecting the correspondence between the internal or spiritual man, and the external or natural ; in what follows we shall treat of the correspondence of the whole of heaven with all the individual parts of man." (3).
(1) Spredenborg's IIeaven and IIcll, No. 90.
(2) Ib., No. 92.
(3) Ib., Ňo. 93.
it were, side by side of each other ; and so of Five (5), or Five Hundred (500).
156. The Third $\left(3^{\text {rd }}\right)$, or Fifth $\left(5^{\text {th }}\right)$, or Five Hundredth ( $\left.500^{\text {th }}\right)$ -Ordinal Number-is, on the contrary, always a Single Unit, not $a$ Group of Units. This, again, is the superficial difference. Its place in a Series of Single Units has always, however, a relation to some Group among the Cardinal Numbers, to which it is therefore analogous, or to which it corresponds. The nature of the relation is this: In arriving at the single Ordinal Unit, the Third $\left(3^{\mathrm{rd}}\right)$, the Fifth ( $\left.5^{\text {th }}\right)$, or the Five Hundredth ( $500^{\text {th }}$ ), for instance, the Mind has had to pass along a Row or Series of such Single Units, in succession, equal numerically to the corresponding Group of Cardinal Numbersthe Three (3), the Five (5), or the Five Hundred (500). This is the Underlying or occult Likeness which subsists in the midst of their Superficial Unlikeness or Difference ; and this occult Likeness or Unity of Resemblance in the Manner of their de-
6. "It has been shown that the universal hearen is as one man, and that it is in form a man, and is therefore called the Grand Man. It has also been shown that the angelic societies, of which hearen consists, are hence arranged in the same order as the members, organs, and viscera in man; so that there are some that have their station in the head, some in the breast, some in the arms, and some in every distinct part of those members. The societies, therefore, which are in any member in hearen, correspond to the same member in man. For instance: the societies which are there in the head, correspond to the head in man ; those which are there in the breast, correspond to the breast in man; those that are there in the arms, correspond with the arms in man ; and so with the rest. It is from that correspondence that man
subsists ; for man derives his subsistence solely from heaven." (1).
7. "In the Grand Man, who is heaven, they that are stationed in the head, are in the enjoyment of every good abore all others: for they are in the enjoyment of lore, peace, innocence, wisdom, and intelligence ; and thence of joy and happiness. These have an influx into the head, and into whatever appertains to the head, with man, and corresponds thereto. In the Grand Man, who is hearen, they that are stationed in the breast, are in the enjoyment of the good of charity and faith: their influs, also, with man, is into the breast; to which they correspond. But in the Grand Man, or hearen, they that are stationed in the loins, and in the organs belonging to generation therewith connected, are they who are eminently grounded in conjugal
(1) Heaven and Hell, No. 94.
velopment-in spite of the fact that in one case we have Groups of Units, and in the other $a$ Single Unit standing in a Series of Units-is the Underlying Law of Unity, or Correspondence, or Analogy, which may be taken to illustrate Exact or Scientific Analogy, everywhere.
157. It is due to this Analogy between the Cardinal and the Ordinal Numbers, that the namings of the Ordinal Numbers are, for the most part, regularly derived from the corresponding Cardinal Numbers; the word Third from Three, Fifth from Five, etc., ( $3^{\text {rd }}$ from $3 ; 5^{\text {th }}$ from 5 , etc.) ; and also, that everybody recognizes, instinctively, the Essential Likeness or Correspondence between these Two Orders of Numbers, even more distinctly than they have heretofore had defined to them the nature of the Difference.
158. So instinctual, indeed, and so radical is this perception of the Underlying resemblance or Analogy-this in turn not heretofore explicitly defined to the mind of the observerbetween these two Orders of Numbers, that the perception not
love. They who are stationed in the feet, are grounded in the ultimate good of heaven, which is called spiritual-natural good. They who are in the arms and hands, are in the power of truth derived from good. They who are in the eyes, are those eminent for understanding. They who are in the ears, are in attention and obedience. They in the nostrils, are those distinguished for perception. They in the mouth and tongue, are such as excel in discoursing from understanding and perception. They in the kidneys, are such as are grounded in truth of a searching, distinguishing and castigatory character. They in the liver, pancreas and spleen, are grounded in the purification of good and truth by various methods. So with those in the other members and organs. All have an influx into the similar parts of man, and
correspond to them. The influx of heaven takes place into the functions and uses of the members; and their uses, being from the spiritual world, invest themselves with form by means of such materials as are found in the natural world, and so present themselves in effects. Hence there is a correspondence between them." (1).
8. "On this account it is, that by those same members, organs or riscera, are signified, in the Word, such things as have just been mentioned ; for all things named in the Word have a signification according to their correspondence. Hence, by the head is signified intelligence and wisdom; by the breast, charity ; by the loins, conjugal love ; by the arms and hands, the power of truth ; by the eyes, understanding ; by the nostrils, perception; by the ears, obedience; by
only does not depend upon, and is not derived from, the resemblance of the namings, but persists equally when no such verbal resemblance is found. In respect to the first two of the Ordinal Numbers, for instance, there is no verbal likeness to the corresponding Cardinal Numbers ;-First does not resemble One, nor Second, Two, so far as the forms of the words are concerned; yet every one understands that First corresponds with One, and Second with Troo, as truly as Fourth with Four, where the verbal resemblance is obvious.
159. It is this underlying Schemative, formal or regulative Resemblance or Unity, such as the Superficial Differences of Existence strive, as it were, till the last moment to conceal or obscure, which, when clearly apprehended-as, now, in the preceding illustration-becomes the intelligible Law or Mode of Measurement between Spheres of Being, despite their differences. This Law, when universalized or extended to all spheres, becomes the Basis of the New Science of Universology.
the kidners, the purification of truth; and so with the rest. Hence, also, it is usual to say in familiar discourse, when speaking of an intelligent and wise person, that he has a head; when alluding to one who is influenced by charity, that he is a bosom friend; of a person eminent for perception, that he has a good nose (or a sharp scent); of one distinguished for intelligence, that he is sharpsighted ; of one possessing great porrer, that he has long arms; of a person that speaks or acts from love, that he says or does it from his heart. These, and many other sayings in common use, are derived from correspondence; for such forms of speech enter the mind from the spiritual worid, though the speaker is not aware of it." (1).
9. "That there exists such a correspondence between all things belonging
to heaven and all things belonging to man, has been evinced to me by much experience-so much, indeed, as to convince me of it as of a thing self-erident, and not liable to any doubt. But to adduce all this experience here, is unnecessary, and, on account of its abundance, would be inconvenient. It may be seen in the Arcana Colestia, in the Sections on Correspondences, on Representations, on the Influx of the Spiritual World into the Natural, and on the Intercourse between the Soul and the Body." (2).
10. "Butalthough there is a correspondence between all things that belong to man as to his body, and all things hat belong to heaven, still man is not an image of hearen as to his external form, but as to his internal. For the interiors of man are recipient of hearen, and his exteriors are recipient of the world ; in proportion,
160. It is by an Analogy of this sort that Feeling, from the bare Sensations up to the holiest affections, in the mind, is put as the Analogue or Echo, within the mind, to Matter or Substance, in the Universe at large; the Impressions on the mind from Nature without, and the Feelings excited thereby in the mind, being the Material upon which the Thinking Faculty reacts when the mind reflects or thinks. They are the Substance which the Intellect forms into Ideas.
161. It is by Analogy of the same kind that the Intellect, Understanding, Intelligence or Knowing-Faculty of the Mind, is then put as the Analogue of the "Logic" of Hegel, the "Mathematics" of Fourier, and the Sciento-Philosophy of my Typical Table (No. 7, t. 42), in respect to the Universe at large. This Knowing-Faculty impresses Form, Forms or Ideas, upon the Feeling or Feelings as a Material or Substance in the Mind; and the Sciento-Philosophy, as a Formative and Regulative Element, does the same-whether as mere Conception in the Mind of the Creator or Observer, or as Immanent
therefore, as his interiors receive heaven, the man is, as to them, a heaven in miniature, formed after the image of heaven at large : but in proportion as his interiors do not thus receive, he is not such a heaven, and such an image. Still his exteriors, which receive the world, may exist in a form which is according to the order of the world, possessing various degrees of beauty for the causes of external beauty, which is that of the body, are derived from a person's parents, and from his formation in the womb, and it is afterwards preserved by the common influx which the body receives from the world ; in consequence of which, the form of a person's natural man may differ exceedingly from that of his spiritual man. The form of certain persons, as to their spirit, has sometimes been shown me; and in some,
having fair and handsome faces, I have seen it to be deformed, black and monstrous, so that you would pronounce it an image of hell, not of heaven ; whereas in some, not outwardly handsome, I have seen it to be beautiful, fair, and like that of an angel. The spirit, also, of a man, after death, appears the same as it had been in the body, while he lived, so clothed, in the world." (1).
11. "But correspondence reaches much further than to man : for there is a correspondence between all the heavens respectively. To the third or inmost heaven corresponds" [tendentially] "the second or middle heaven; and to the second or middle heaven corresponds the first or ultimate. To the first or ultimate heaven also corresponds the form of man's body, called its members, organs and viscera. Thus the corporeal part
and Constitutive Law in Nature herself-for the Matter or Substance of which all things are made.
162. It is again by Analogy of the same kind that Conation, the Effort towards Action in the Mind, embodying the Will and Desire, is put as the Analogue of the Universal Conatus or Effort of all Being, manifesting what we sometimes call "Spirit," along with Fourier, in the Movement or Action of all things in the Universe. (c. 1-8, t. 143).
163. Stated with more condensation, Feeling is the Substance, Intellect the Form, and Will the Conatus towards Movement, in the Mind; and, hence, Substance, Form, and Movement, as these Elements of Being appear universally, that is to say, in the Universe at large, or in the Constitution of all things, are the Analogues of these three Departments of Mind, respectively.
164. We thus begin to bridge over the immense gap which has always heretofore yawned between the Metaphysical and the Physical Domains of Knowledge and Inquiry, by
of man is that in which hearen ultimately closes, and upon which, as on its base, it rests." (1).
12. "All things that belong to the earth are divided into three general kinds, which are called so many kingdoms. There is the animal kingdom, the regetable kingdom, and the mineral kingdom. The objects of the animal kingdom are correspondences in the first degree, because they live those of the regetable kingdom are correspondences in the second degree, because they only grow ; and those of the mineral kingdom are correspondences in the third degrea, because they do neither. Correspondences in the animal kingdom are animated creatures of rarious kinds, both such as walk and creep on the ground, and such as fly in the air; which it is needless to mention specifically, because
they are well known. Correspondences in the regetable kingdom are all such things as grow and flourish in gardens, woods, corn-fields, and meadows ; which, likewise, it is unnecessary to name specifically, because they also are well known. Correspondences in the mineral kingdom are all metals, both the more noble and the more base, precious and common stones, and earths of rarious kinds; not excluding water. Besides these products of nature, those things also are correspondences which the industry of man prepares or manufactures from them for his own use ; such as food of all kindes, garments, houses, public edifices, and similar objects." (2).
13. "The objects mhich are stationed abore the earth, such as the sun, moon, and stars; also those that are seen in the atmosphere, such as clouds, mists, rain,
finding the Law of the Distritution of the Phenomena of the Mind and the Laro of the Distribution of the Phenomena of the External Universe, and so of the Universe at large to be Identical, or the Same-one with the other.
165. This Idea of Echo between different Realms or Domains of Being, and hence of some kind of Analogy between them, is not, as we have seen, new. Poetically and Mystically, that is to say, Imaginatively, it has abounded in the Past. In a most profoundly Thoughtful Sense it is the Basic Idea of the Hegelian Philosoply. It is propounded, however, therein, still in that rague and generalizing sense which is the Philosophoid or Naturoid Style of Conception, as contrasted witil the Definitiveness of true Science. The greatest effort of tha ${ }^{2}$ Development of Thought to attain to Scientific Applications and Uses was the labor of Oken, and the fate which attended it has been already mentioned. A remarkable little work of the same order, a summing up of the drift of German Philosophy towards Science, is "The Harmony of the Worlds" ("Die
thunder, and lightning; all likewise are correspondences. Those which proceed from the sun, and his presence or absence, as light and shade, heat and cold, are also correspondences; together with those which thence exist successively; lite the seasons of the year, which are called spring, summer, autumn, and winter; and the times of the day, or morninf, noon, evening, and night. In a work, all things that exist in nature, from its minutest parts to its greatest, are correspondences." (1).
14. "Every object is a correspondent, which exists and subsists in nature from Divine Oruer. That which constitutes Divino Order is the Divine Good which proceeds from the Lord : it commences from Him ;"it proceeds from Him through the heavens in succession into the world, and is there terminatel in ultimates. The
things which exist in the world accoraंing to order are correspondences. All things there exist according to order, when ther are good, and perfectly adapte? to their intended use; for everything good is such according to its use: ils form has relation to truth, because trut! is the form of good. Hence it is that all things in the whole world, and partaking of the nature of the world, which are in divine order, hare relation to good anil truth." (2).
15. "The animals of the earth, in general, correspond to affections, the tame and useful animals corresponding to good affections, and the fierce and useless kinds to evil affections. In particular, osen and bullocks corresnond to the affections of the natural mind; sheep and lambs to the offections of the spiritunl mind, and birảs or winged creatures,

Harmonie der TVelten'"), by Dr. Farl Schmiãt. That whole derelopment of Thought functionates, howerer, in the Clef, 1 ; 0 ; which is still too rague and generalizing for definite Scientific results, as contrasted with the Clef, $1 ; 2$; which is emphatically Scientoid, and which now remains to be more extensirely expounded. Science Proper has become disgusted with, and chary of trusting to, Analogy, from the promises heretofore made and broken. Universology accepts the difficulty of overcoming the unfarorable judgment thus rendered, and appeals to its own current of demonstrations.
166. Science has itself, however, made some noteworthy efforts towards the Comparison of different Domains of Being. This new drift of investigation has been nowhere carried farther than in Comparatire Anatomy. Perhaps the Diagram of a Typical Vertebra in Richard Owen's "Homologies of the Vertebrate Skeleton" is the highest point to which Science has heretofore attained in the world. A more extended statement of what Science has heretofore accomplished in this field of
according to their species, correspond to the intellectual faculties and exercises of both minds. Hence it is that various onimals, as oxen, bullocks, rams, sheep, she-goats, he-goats, and male and female lambs, also pigeons and dores, were emplored in the Israelitish Church, which was a representatire one, for hols uses, it being of them that the sacrinices and burnt-offerings consisted; for when so emplored, they corresponded to certain spiritual things, and were understood in hearen according to their corresponcences. Animals, also according to their genera and species, actually are affections; the reason of which is because they live; and nothing can hare life, except from affection, and according to it. Hence, likewise, it is, that ever: animal possesses an innate knowledge according to the affection of its life.

Man, too, as to his natural man, is like the animals ; wherefore, also, it is usual to compare him to them in common discourse. Thus a man of mild disposition is called a sheep or a lamb; a man of rough or fierce temper is called a bear or a Trolf; a crafts person is termed a for or a snake ; and so in other instances." (1).
10. "There is a similar correspondence with the objects of the regetable kingdom. A garden in general corresponds to hearen as to intelligence and wiscom, wherefore hearen is called (in the word) the garden of God, and Paradise, and is also named by man, the hearenl! Paradise. Trees, according to their species, correspond to perceptions and knowledges of good and truth, from which are procured intelligence and wisdom. Therefore it was that the ancients, who were skilled in the science of corresporidences,
(1) Hearen and Hell, Nos. 110, 111.
inquiry, the Comparison of Different Domains, will be found in the "Structural Outline of Universology." c. 1.
167. While previous thinkers have admitted the Idea of Analogy, they have not to any extent planted themselves centrally upon it, that is to say, upon the Line or Limit of Difference between Domains; or, otherwise viewed, at the centre of Unity between them ; but have always occupied some one Domain more or less exclusively. Thus the Categories of Kant, as understood by him, are Categories only of the Understanding, a department within the Mind, and not Categories, as I mean them, and propose to demonstrate them to be, of Universal Being-the Logic of the External World, precisely as they are the Logic of the Mind. Chalybaüs, one of the latest of the expounders of the German Philosophy, says expliditly, in speaking of Kant: "The categories of which we have spoken, are not Laws of Nature, in accordance with which External Objects in Nature are obliged actually to move or to act - they are merely the Laws of that part of our

Commentary t. 166. The magnificent contribution made to Science by Descartes in the reconstitution of Geometry, through the application of Algebra, is in fact simply the discovery of a branch of the Exact or Scientific Analogy which exists between Number and Form, whereby it becomes possible for Figure and Position, and even Direction, to be expressed in Numerical Terms. This of course is more basic and more extensive than the instance cited from Owen; but it does not advance so far into the Concrete and Homogeneous, the more difficult domain; and it is in that sense only that it does not touch so high a point in actual Scientific Solution.
celebrated their sacred worship in groves; and hence it is that, in the Word, trees are so often mentioned, and heaven, the church, and man, are compared to them, 2.s to the vine, the olive-tree, the cedar and others; and good morks are compared to fruits. The various kinds of food, also, which are obtained from them, especially those from grain, correspond to affections of good and truth, because these sustain man's spiritual life, as earthly food sustains his natural life.

Hence, bread in general corresponds to the affection of all good, because it supports life better than other aliments; and because by bread is meant all food whatever. On account of this correspondence, also, the Lord calls himself the bread of life; and for the same reason loaves were applied to a sacred use in tho Israelitish Church, being placed upon the table in the tabernacle, and called the shew-bread; and hence, likewise, all the divine worship performed by sacrifices

Nature which thinks, of our Understanding, in accordance with which it has to proceed." The Categories of the Understanding are, on the contrary, in the view of Universology, identical, in a sense at least, and by a precise Echo, with the Categories of External Being, and thus the Science of Mind is identical with the Science of ${ }^{7}$ Trature, or, otherwise, echoes or corresponds to it.
168. Eren with regard to Hegel, Chalybaüs again says: "It seems most dificult to discover a necessary transition from Logic to the Philosophy of Nature; and this is the point to which his opponents, and Schelling at their head, are wont to address their most strenuous attacks." (1).
169. Fourier, on the contrary, as a Naturalist, for he must be reckoned on that side in his approach to the consideration of Society, has distinctly propounded a doctrine of Universal Analogy, but still one characterized by vagueness and scientific insufficiency. At the start he has dipped down into a metaphysical discrimination for his Basis, as quoted in the
and burnt-offerings, was called bread. On account also of this correspondence, the most holy solemnity of worship in the Christian Church is the holy Supper, the elements used in which are bread and wine. From these few examples the nature of correspondence may be seen." (2).
17. "Man is all symmetrie-

Full of proportions, one limb to another, And all to all the world besides.
Each part may call the farthest brother; For head with foot hath private amitie, And both with moons and tides."

## "Nothing hath got so farre

But man hath caught and kept it as his prey,
His eyes dismount the highest starre;

He is in little all the sphere.
Herbs gladly cure our flesh, because that they
Finde their acquaintance thcre." (3)
"A rast similitude interlccks all,
All spheres, grown, ungrown, small, large,
Suns, moons, planets, comets, asteroids,
All the substances of the same, and all that is spiritual upon the same;
All distances of place, howerer wide,
All distances of time - all inanimate forms,
All souls-all living bodies, though they be ever
So different, or in different worlds,
All gaspous, watery, vegetable, mineral processes-
The fishes, the brutes ;

[^27]last preceding Table ; but for Metaphysics as such, and the Metaphysicians, he had, as well as Comte, a profound contempt. It will appear in the end, however, that true philosophical greatness is hardly compatible with habitual contempt for any sphere of Human Thought, or even for any grade or variety of Human Character or Development.
170. The three discriminations of Being assumed by Fourier, 1. Mathematics; 2. Matter; 3. Spirit, he denominates the Principles of Being. They are not, however, in any proper sense, Principles. They are, on the contrary, no more than broad generalizations of the Facts of Being, and may properly enough be denominated Spheres, Domains, or Departments, or still better, Factors, of Being.
171. Arthur Young, of the school of Fourier, with more tendency than any other of that school to a Mathematical and Positive Treatment of their subject, has adopted, in a work recently published, " "The Fractional Family," - this threefold Distribution of Fourier as Basis, choosing the Natural Order,

All men and women-me also,
All nations, colors, barbarisms, civiliza. tions, languages,
All identities that have existed, or may exist, on this globe or any globe,
All lives and deaths-all of past, present, future,
This vast similitude spans them, and always has spanned, and shall forever span them, and compactly hold them." (1).
"All animals are living hieroglyphs.
The dashing dog, and stealthy-stepping cat,
Hawk, bull, and all that breathe, mean something more
To the true eye than their shapes show." (2).

*     *         * " An all-explaining spirit, Teaching divine things by analogy With mortal and material." (3).

18. In addition to Swedenborg and the Poets, for the Doctrine of Analogy as a semi-scientific, semi imaginative, and always Mystical Exposition of Nature, or of previous Scriptures, the student may consult the Hermetic Philosophers, the Spiritists, and numerous other writers. Among the most interesting and striking recent instances of this style of Literature are the Divine Drama of History-The Rock and the Sand, by Rev. James E. Smith, London; The Arcana of Christianity, by T. L. Harris, of Nerr York, professedly an exposition of the Celestial Meaning of the "Word" or Scriptures, as a step beyond Swedenborg's exposition of their Spiritual Meaning, which he accepts as his basis. See also a Symbolic Exposition of the book of Job appended to the Frothinghams' work [Boston], entitled Ontology an Exact Science.

[^28](2) Festus, p. 249.
(3) Ib., 233.
as, 1. Matter; 2. Mathematics; 3. Spirit. The following extract from this work is too cognate with the purposes of my own labors to be omitted here:
172. "The Universe is a Compound of only Two Principles, or, it is Spirit-Matter, when we consider it under the aspect which first and most readily presents itself :


## but it is a compound of Three Principles, or it is Spirit-Mathematics-Matter ;


19. There is no field of Analogy which will be so immediately and extensively labored, and with such rich results, as Language. It is the echo of identity between Sound and Sense, first to be scientifically established, which will then found the New Scientific Universal Language. Two works are far advanced in preparation, and will be among the earliest to follow the present volume, to be entitled "The Alphabet of the Universe, with the Solution of the Problem of the Origin of Language and of Languages," and "The Universal Alpbabet, including a Cosmopolitan or Ethnical Alphabet, on the Basis of the Roman Alphabet, for printing and writing all Languages in a uniform manner: to-
gether with a revised English-adapted Phonetic Alphabet in aid of the Spelling Reform of the English Language,"-respectively. The sixth chapter of "The Structural Outline of Universology" will be, in addition, preparatory for the New Language. These will be followed by "The Introduction to Alwato," and by Grammars, Vocabularies or Dictionaries of Alwato, with Readers, and with portions of the Scriptures and other Standard Works translated into the New Language, all of which are in various stages of preparation or advancement, in the Sciento-literary Laboratory of the University-an entire new literature, in fine, of the Universal, or Planetary order.
when we consider it under its true and complete aspect, by inserting betwixt the two opposite, contrasted, or Polar Principles, their Central Principle of Connexion and of Distributive Order.
173. "Spirit is the Principle of Action, Force or Movement;
"Matter is the Principle of Reaction, Attraction and Passivity; and
"Mathematios is the Principle of Numerical and Geometrical Distribution, by reason, or by the ratio-nal laws of which, Spirit distributes Matter progressively, into all its varieties of Form and Combination, Properties and Functions ; and regulates and proportions each to each, and all to all.
174. "Wherever, therefore, we have Being or Thing, Form, Property or Function, we have Spirit and Matter mathematically distributed and co-ordinated,-
"-co-ordinated, viz., according to numerical and geometrical laws, from which their respective and relatively diversified aspects, and properties, and functional activities flow.
175. "Spirit acts, and Matter reacts, along a Primary Axis, which connects the two opposite Poles ; and the Mathematical and Distributive Centre of this Primary Axis, where the contrasted Forces combine, originates a Transverse Axis of Distributive Movenent, of a Three-fold Nature:


MIatter.
"First. An Inverse or Negative Movement of Differentia-tion-or that which distinguishes the different parts of a mass or whole-which individualizes its constituents or elements, or separates, or parts, or fractionates progressively, and which,
parsued to its extreme, reduces everything to the Infinitely Small.
"Second. A Direct or Positive Movement of Integration, or that which maintains the fundamental One-ness, Unity or Whole-ness of the individualized parts, notwithstanding their separation, partition or fractionating, and which, pursued to its extreme, embraces All in the Infinitely Great.
"Third. A Central or Neutral Movement of Co-ordination, which connects the Inverse and the Direct, or Differentiation and Integration, byreferring the constituent elements or parts of any Unities or Wholes to some common fixed points or principles; as when we Co-ordinate lines by referring them to the Triangle and Circle, and thus constitute Geometry;or by distributing such constituents or elements, or parts into progressive Scates or Series; -as in the case of the Musical Octave;-Arithmetical and Geometrical Series ; or also as exhibited in the following distributions :
Inverse. $\quad$ Nevtral.
The Individuat,
The Series,
Fractional Groups. Sthe Group,
-or by determining proportionate Numbers; as in the case of
the composition of Water, the constituents of which are 8 parts
by weight Oxygen, and 1 part by weight Hydrogen; in which
case Oxygen and Hydrogen represent the Inverse or Differen-
tiating Distributive Movement, Water the Direct or Integrat-
ing, and the ratio of $8: 1$ the Neutral Movement; and which
we may exhibit thus:

Interse. Neutral. Direct. Hydrogen, Oxygen, HO . Water. -or by establishing limits; as in the case of the Neutral Idea of Space ; or in that of Maxima and Minima, etc. ;-or also by determining Geometrical arrangements; as in the case of minerals and crystals, or Symmetry of form in general. Anci from all this it will be seen that the problem: of Neutral

Movement (Mathematics) are at once the most diflcuit and the most important of Philosophy, and that they require our utmost attention in questions which have reference to Society and Industry." (1).
176. The gist of this extract is in the parception, therein so clearly stated, first, That the Mathematics are a Neutral, and hence an Impartial Domain, and secondly, the implication, at least, that there is lying, as it were concealed, in this domain the final Solution of our Philosophical and our Practical difficulties. This intimation accepted, as I understand and intend it, is a perception alike new to the Philosopher and the Scientist; for by Mathematics is here meant, not the Calculus, but THE Spirit of Mathematics, as a Philosophy;-the Metaphysics of Mathematics;-the Logic of Hegel, not specularively and vaguely, but exactly and mathematically, developed; not Transcendental Philosophy under the clef 1; 0; but Scientio Philosophy under the clef 1; 2.
177. It is in this Neutral Domain of Being that the richest mines of human thought are to be worked hereafter. The "Forces" of Hickok and Spencer are no more adequate to give the final answers to the Interrogatories of the Sphynx, than the Eartif, Air, Fire, and Water, of the Greeks; or, than the 1; 0 Theory of the Germans. The Artoid Aspect of Philosophy is no more the Umpire of Truth than the NateRoID. The Impartiality and Exactitude of SCIENCE must intervene in the end, to judge and to decide. The Head must come to preside alike over the Heart and the Hand.
178. The allusion above to the end-as if Philosophy were in some sense to attain its end, and, in so doing, come to an end-furnishes an occasion for correcting a misapprehension, and for making an important distinction :

The idea is entertained in some quarters, that, should the real discorery be made of the Scheme and Laws of the Universe, such discovery would bring about the prevention of all

[^29]farther progress, and be in a sense, therefore, the destruction of the Intellectual World. This Idea is parallel to that Religious Paradox of Opinion: That the advent of the Millennium on Earth will be synchronous with the destruction of the Material World ; that is to say, of the same Earth into which the Millennium is to be introduced. This point in respect to the World of Thought, is strongly put by Chalybaüs, as follows: "We observe that every object in the economy of nature presupposes what we would term its antagonist; the leaf on the branch seems to call forth another on the opposite side, as if to preserve the equilibrium. The same law manifests itself also in the growth of mind and in the organic development of consciousness. While progress in the formation of the whole is the aim, the alteration in the individual parts is due to the appearance of contraries ; for it is noticeable, that, whenever any philosophical fundamental view was pronounced in a decided form, it also stood forth, ipso facto and necessarily, as one-sided. But immediately an opposite statement, roused up by contradiction, made its appearance, and criticism entered the lists on both sides of the question. But both these extremes only served to call forth a third view, to add a new sprout on the branch, which in turn was destined to pass through the same process of development. Whether and where this development shall result in that blossom, which would at the same time be its termination, we feel to be an inquiry to which, as yet, we cannot return a reply. Such an actual perfection of consciousness, were it attained, would also mark the end of the development within the reach of our species ; and our globe, in its present form at least, would then have also served its purpose for the general economy of intelligences. Its ulterior fate would belong to a period yet future in the history of the World ; nor shall we hazard any speculation thereon." (1).
(1) Chalybaūs, Speculative Philosophy, p. 25.
179. So far from the kind of discovery in question being "the end of the derelopment within the reach of our species," it will, on the contrary, be the true Beginning of All Orderly and Spiritually Organized Progression. The entirety of Mental Struggle and Progress previous to this discovery is first Chaotic, and then Embryonic, and at best Infantoid, and such, therefore, as is destined to give place to another Order of Progress, under the guidance of Known Laws, and directed to a Definite End, which is the Infinite Practical Perfection of Humanity, or of the Total Rational Creation.
180. The true Analogue of the valid Discovery of a Unitary Law is not, therefore, the blossom which perishes, but something far more radical and elementary. It is, namely, the Centre of the Circle of Being, towards which all the rays of Primitive Mental Progression have been hitherto irregralarly, but gradually converging.
181. When this Centre is reached, Progress of that Find is arrested. Erery Pilgrim to this Mecca or Jerusalem then turns his back upon the Caaba, or the Holy of Holies, and proceeds outwards from the former object of his aspiration to his Home in the Distance. That is now his point of departure, which roas previously the Goal in prospect.
182. So the Unitary Centre of all rational Thought and Principle, when discovered, becomes, by a Total Reversal of the Dircction of Progress, a Point of Departure for the New and Orderly and Organized Morement of the Reason-and of the Conduct then regulated by the Reason-outwardly upon every radius oi the same circle, to Infinity.

1S3. Each of the Special Sciences, for example, has hitherto been working up, blindly and tentatively, towards some Centre of Common Principle, which seemed to preside, in a recondite manner, over all the Sciences. This, when discovered and demonstrated, becomes the Common Bond of all the Sciences, or the Unity of the Sciences, or the Science of the Sciences, or, in a word, Universology. This initiates a new Universal and

Iniallible Method of Deduction-from the Centre Outwardin the place of the painful uncertainty of Induction-from a given circumference of Observation inwardly towards an urknown Centre ;-not indeed to the total exclusion of Induction, but as reducing' it to the secondary and less important position. So far, therefore, from coming to an end of Progression by the discovery of the Unity of Law in the Universe, we shall come only to an end of Progression, unregulated and vacillating in character, along a quasi-radius towards the Unknown Centre, and feeling its way, as it were, for the discovery of that Centre. Then, by a Polar Inversion, or Terminal Change of Direction, we resume Progress, with a firm step and a reliable guidance, from the now Known Centre, outward upon all the Radii of the Circle, or upon any given one of them, in a career which, in this outward direction, is bounded by no circumference, and is, therefore, infinite or endless.
184. In the First Drift of our Progression, from the accidental circumference of Observation at Individual Positions towards the Unknown Centre of Rational Law and Order and Harmony in the Universe, we are chiefly under the reign of the Instinct or Intuition. The Reason is indeed active. It is, however, as a Rebel, a Dissenter, a Scepiic, a Protestant, or an Investigator striving to thread the labyrinth and to regulate or to find the means of regulating the disorders of Existence. In this effort it becomes Inductive, that is to say, broadly Observational, with the Classification of Phenomena.
185. In the new and reversed drift of Progression from the Centre, although the career of Mind is outward to Ininity, it will be ever consistent and regulated, because it will rest as its point of departure upon a Fixed Centre of Intellectual Unity, by which also the Affections and the Conduct will likewise be drawn into a Co-operative Harmony, and Unity of the Race will thus be practically secured.
186. What Chalybaüs therefore dreads, as the end of all Progress, is only its Proper and Orderly Beginning. It is the
same as with the Millennium which the more intelligent Theologians explain to us as the Prospective, and at this hour, the Imminent Destruction of an Old and Imperfect Dispensation of Human Affairs, and the Replacing of it by a Higher and more Perfect one. c. 1.
187. The change of the drift of Direction into the precisely opposite drift of Direction, when any career has been run to its natural terminus, and the inauguration of the Return Career by this total change of Drit, is the important and frequently recuring Law of Universology, which has been already stated, as Termirval Converision into Opposites. (t. 83). c. 1.
188. The Mathematical or Scientoid Mlustration of the Circle with its Radii, descriptively introduced above in the place of the Plant and its Blossom used as the illustrative metaphor. by Chalybaius, is so important for the purposes for which it is adduced, that I add the following Diagram, as still further illustrative :

Commentary t. 186. 1. The Oneida and Wallingford Perfectionists have a Scheme of Theology, derived from their founder and leader, Rev. John H. Noyes, in accordance with which the Second Coming of Christ actually occurred, according to the literal prophecy, within the time of the generation living upon the Earth at the time of his Crucifixion. Christ came, according to them, about the jear A. D. 70, "like a thief in the night," and called away into the Spirit-World the handful of True Believers, and set up his Kingdom, not on Earth, but in the Spirit-Life. That was, according to them, the beginning of the Millennium (the thousand years) the whole of which is now past. They concur, however, with the general expectation of the Christian Woild, mentioned in the Text, that Christ is now about to cstablish formally and cateinally his Kinghlom upon the Earth; and they have recently proposed as the appropriate name for this new Societary Order the term Pcremium (through all years). The word, quite appropriate in itself for the expression of their views, is unfortunate in its Adjective Perenninl, which has already a wellestablished non-technical meaning. Millennium and Millennial may very well be retained in the sense they have a!ready acquiren, beyond their Etymology, as relating to a reign of Harmony not literally limited in Time.

Commentery t. 18\%. 1. This Termival Conversion into Opposites applies, as well as to any other line or stick (t. 83), to a Radius of a Circle along which we may travel inward to the Centre, and thence outward, from the Centre, or cice versa. And when this occurs with reference to all the Radii of a


Note.-The crooked lines from the circumference to the centre denote Induction : the straight lines outward from the Attained centre denote Deduction, after the Unitary Law is discovered.
189. The importance of this subject will justify still another illustration. The Universological Basis of Truth is no more the Finality of Philosophy, and of Human activity, than the discovery or invention of the Multiplication Table was the Finality of Mathematics. The whole past effort of Philosophy

Circle we have a Terminal Conversion from Involution to Evolution, or vice versa. It is important to familiarize the mind with this application of the Principle as between the Within and the Without of Circles and Globular Objects and Conceptions. In the case in the Text the change is from the cautious In-gathering of the Inductive Method to the Bold and Well-assured Outgoing of Deduction.
has been to find an Epitome and Regulator of all Thinking, which should be to Philosophy and Science Entire, what the Multiplication Table is to our particular knowledge of the Combinations of Numbers-a guide to special applications and a guard against errors. It is obvious, therefore, that such a Discovery, while it is the end of an Incipient Career employed in the search after its discovery, is the beginning of the Normal and Superior Development.
190. This illustration is also good for another purpose. It takes from my Personality, in propounding the Principles of the new Science, the position of Arbitrary and Dogmatic Authority-an Authority which would ritiate the true ScientoPhilosophic point of riew. If we had never had a Multiplication Table until now, the fortunate Discoverer of this systematic arrangement of the Elementary Relations of Numbers might or might not prove to be the most able of mathematicians in the application of that Table to its ulterior uses. That would remain a question of fact, to be decided afterwards. In the same manner, in tendering the Unitary Law of the Sciences as the Science of Universology, I am placing in the hands of all others, an instrument which they as well as myself can and will gladly employ. I am also teaching a Method in the use of the Instrument which will in their use of it as readily and severely criticize me, and correct my errors, as in mine it will do the same for them and theirs.
191. Since Hegel, there has been no distinct and prominent pretension, even, to the discovery of a Unifying Scheme of Ideas in all the Spheres of Universal Reason. All Europe was agitated by his claim, and the promise, contained in it, of the Ultimate Solution. We have seen it fail practically of a full realization of the promise, and I have pointed out partially already, in what precedes, the cause of the failure. His Dialectic of Positive and Negative, while true as a Contribution to the whole Truth of the Subject; while almost Ultimate in the Direction of Radical Analysis ; and while immensely im-
portant in itself, is still in the Nnn-developing and Indefinite Series under the clef $1 ; 0 ;-$ not in the Developing, Definite, and Fructifying Series under the clef 1; 2. ( t 176).
192. Hickok, one of the latest of the Philosophers, cautiously and modestly disclaims the pretension of having arrived at, or completed such a discovery. We have also his authority, as a Theologian, for the position that there is nothing irreverent in the search, nor, if well founded, in the claim itself. The following extract from the Introduction to bis work on Cosmology covers these points:
193. "Inasmuch, then, as Nature is a rational creation, the Creator must have put his own idea into it, and the Principles that determined in the making, must come out in its on-going. The development of the determinations of the pure principle must harmonize with, because they have necessitated, the Laws in the actual Facts; and the study of the facts in the necessary laws, and of those laws in the determinations of their Eternal Principles, is the only possible method for attaining to the Creator's idea, and thereby rising to any Science of the Universe, and attaining what may be termed a Rational Cosmology. It is no presumption to seek for this Divine Idea; it need have nothing of irreverence to disclose so much as may be attained; yet it will be premature, doubtless, for a long time to come, to announce that such idea has been completely apprehended, and may be adequately stated, in any Human Philosophy. So much as has been gotten and given in the following pages, the careful reader will at length discover, and some may perhaps hereby be led to seek further and to see clearer. The process is directly on to the vindication of a pure Theism, and the exclusion of both Atheism and Pantheism."
194. I return now to my previous affirnation, that Matter, Mathematics, and Spirit cannot, except in a very generalized sense, be denominated Prinoiples. I should prefer to name them Factors of Being. We should not name the Bricks, the

Mortar and the Architectural Plan, as the Three Principles of Building, nor even the Materials, the Architectural Plan and the Uses of the Building ; although these are certainly, three generalized aspects of the whole subject. The Principles of Building, in any exact or scientific sense, would all require to be sought for within the mathematical Science of Architecture itself. So if, in any exact or positive sense, we are to seek the Principles of Universal Being as a guide to the Arts of Construction, Social or otherwise, in our own hands, all of these Principles must be sought within the exact Domain, namely, within what Fourier denominates the Mathematical or Neutral Department of Being. The two remaining Factors or Departments of Being, Matter and Spirit, and even this one, the Mathematics themselves, as a Factor or Department, are not then, in any proper or exact sense, the Principles of Universal Being. They are only the joint and several subjectmatters or masses of materials in a Three-fold Distribution, which the Principles of the Science of the Universe, to be sought for and educed from the Neutral Domain, are to be called upon to explicate or expound.
195. From a higher and Transcendental point of view, we might then anticipate, from the prevalence of this number in all Primary Distributions of the Unity of Being, that there should be Three Primordial and Fundamental Principles of the Science of Being, as exact as the Principles of any Science, and derivable wholly from within the Exact Domain of Being here named Mathematical ; and also that these Principles should be so combined and related that they should be, in another sense, one single Principle.
196. We are reminded in this manner of the Trinity in Unity of the Theology of the Great Body of the Christian Church, and at the same time of the Unitarian Protest, which reverts to the absolute Monotheism of Mahometanism, the Unitive Branch of the Hebraic Monotheism, and so affirms the Unitive Aspect of the Idea, in its abstract isolation. All that is precti-
cated, in these diverse utterances of Faith, of the Inherent Constitution of the Being of God, will find itself completely illustrated and reconciled by the Scientific Laws of the Inherent Constiiution of the Universe.
197. These Three Principles of Science exist, and are coming to be recognized empirically in the Scientific World. They are what Young, in the extract above made, denominates, 1. Differentiation ; 2. Integration ; 3. Co-ordination. This is the Logical Order. In the Natural Order, the relative positions of the first two are reversed, and the Trigrade Series then stands as follows: 1. Integration (or the Primitive Wholeness) ; 2. Differentiation ; 3. Co-ordination. Differentiation and Integration are the bases of the Philosophy of Spencer. He in the first instance propounded Differentiation as the single and sufficient Law of Development, but with the outworking of his own scheme he incurred the counterworking of the opposite Pxinciple : Integration.
198. These three Principles are stated with approximate accuracy by Mr. Young, but this whole Trio of Principles, now struggling for recognition, as Transitional from Philosophy to Science, has been hitherto only half discovered, even as Inductive Principles, or Generalizations of the Facts of Universal Being. Still less have they been demonstrated as the Inherent and Necessary Principles of all Being, and hence as the secure Basis of a Universal Deduction of all the Facts of Existence ( $t .321$ ). Without this no Universal Scientific Principles can be said, in the higher or proper sense of Transcendental or Pure Science, to have been discovered at all. To effect this Demonstration, and so to inaugurate the Reign of Universal Scientific Deduction, is the purpose of the present work; and to accomplish it will be to found the new Science of Universology. a. 1-12.

[^30]199. We are carried forward already to the expectation that the Universal Scientific Principles of Being are to be found in some connection with Mathematics ; and also, to the apriori probability, from the prevalence of that Number in all the great Ruling Distributions, that these Principles will be, in some leading sense at least, Three in Number ; but as yet we hare secured no rational grounds for these beliefs. We may be told, or may perceive, that the Facts are so, but we have no knowledge of $20 \% y$ they are so.
200. Comte has furnished the Rational Basis for the first of these Beliefs-namely: that the Fundanental Principles of all Science are to be sought in the Mathematics-by establish-
not otherwise. The Maker has so constituted the Fact, but in our ignorance of what determined Him in the making, we can only find in experience that the fact is, and can by no means say uchy it is.
2. "Princtples are truths prior to all facts, or makings, and are themselves unmade. They stand in immutable and cternal necessity, and while they condition all power, can themselves be conditioned by no power. Even Omnipotence can be wise and righteous, only as determined by immutable principles. The iasight of the reason may of cen detect, in the fact, the principle which determined the nature of the fact, and in the light oi such principle we can say $u$ chy the fact is, and not merely that it is.
3. "The perception of the sense gires facts; the insight of the reason gives principles. The use of facts may lead the mind up from particular to general judgments whereby we may classify all the attainments of sense, and secure an intelligible order of experience; the use of priaciples may guide the mind to interfret and explain facts, and raise its huowledge from that of a logical experience to philosophical sci-nce. Not facts
alone, no matter how logically classified, but facts expounded by principles, constitute philosophy." (1).
4. "Conviction from testimony is Firtir; Experience in Consciousness is KnowlEDGE; and the facts in experience carried back to a Law which binds them together in Systematic Unity is Science. When this Law is found by bringing many conspiring facts together, and assumed to be universal, because it expounds and combines them so far as applied, it is Inductive or Empirical Seience. When the Law is determined from a Necessary Principle, and thus in the Principle it is befurehand seen what the Law, and therein also, what the Facts must be, it is Transcendental or Rational Science.
5. "The Principle must be an Uliimate Truth, which in the insight of the reason is given as having in itself Necessity and Cniversality and which ecnsequently is not conditioned by Pouccr, but must, itself, condition all Power. It is thus no Fact, or thing made, but an Eternal Truth which in the reason determines low things must be made. Thus no three points can be made, which must not be in one plane; and no cone can be

[^31]ing the fact that the Mathematics are the Basis or Fundamentum of the Pyramid of the Sciences, in virtue of their greater Simplicity and Generality ; properties which constitute the Elementary Character of this, as of other Elementary, Domains. He failed, however, to draw from this demonstration, the consequence which I am here educing from it ; namely, that it is in this Elementary Domain of Science, that the First Principles of all Science must be sought. c. 1-5.
201. For establishing the Second of these Beliefs, namely : that the Fundamental Principles of all Science, and correspondentially, of Being itself, as the Subject-Matter of Science, must be Three in NTumber,- we have only to pursue the same

Commentary t.200.1. "M. Comte classes fhe sciences in an ascending series, according to the degree of complexity of their phenomena : so that cach science depends on the truths of all those which precede it, with the addition of peculiar truths of its own.
2. "Thus, the truths of NUMBER are true of all things, and depend only on their oron lawos; the Science, therefore, of Number, consisting of Arithmetic and Algebra, may be studied without reference to any other science. The truths of Geometry presuppose the laws of number, and a more special class of laws peculiar to extended bodies, but require no others: Geometry, therefore, can be studied independently of all sciences, except that of number. Rational mechanics presupposes, and depends on, the laws of number and those of extension, and along with them another set of laws, those of Equilibrium and Motion. The truths of Algebra and Geometry nowise depend on these last, and would have been true, if these had happened to be the reverse of what we
made, which must not with its diameter, on all sides through its base and surface, be a right-angled triangle. With such Principle as an ultimate truth in possession, it must further be competent to carry its determinations all through the process that is to be passed in the making, and thus beforehand to see how the Principle is a perfect scheme for the Fact ; as in the cone, it is competent to see that a right-angled triangle revolving about one of its sides containing the right angle, is a perfect scheme for its making. The Universal Principle goes through, and determines every part of the process, and, except as you can so
carry the Principle through the Process, you can never determine that you have made an Exact Cone. In this perfect scheme for the fact we have beíorehand a complete Idea of the fact. But so far, this is only a science of the possible, and not yet a science of any reality. Perhans there is no actual maker, or no existing material, that shall secure such a fact really to be. The animal could not make the exact cone, if he had the material, and the rational man could not make it, if he had no other than fluid materials.
6. "Some really existing fact must be given in which we call find a Laso running all through it, and which gives

Method of Reasoning, which places the Mathematics at the bottom of the Pyramid,-downward to the Simplest Elements of Thoughts and Things. If mere Number is the Simplest, most General, and hence the most Elementary of the Domains of Thought and Being, we have next to inquire what is most Simple, most General, and most Elementary roithin this whole Domain of Number. Here the Numbers One (1), Two (2), Three (3), the beginnings of the Numerical Series-or of all Count-answer to our call, and appear as the First Heads or Principles [Lat. Prin-cips, (Nom. Princep.s, Gen. Prin-crp-is =Prim-cap- $i s)$ for Prima Capita, First Heads] of the whole Positive Numerical Domain. It is here that the
find them: but the phenomena of equilibrium and motion cannot be understood, nor even stated, without assuming the laws of number and cxtension, such as they actually are. The phenomena of Astronomy depend on these three classes of laws, and on the law of gravitation besides; which last has no influence on the truths of number, geometry, or mechanics. Physics (badly named in common English parlance Natural Philosophy) presupposes the three mathematical sciences and also Astronomy ; since all terrestrial phenoniena are affected by influences derived from the motions of the earth and of the hearenly bodies. Chemical phenomena depend (besides their own laws) on all the preceding, those of physics among the rest, especially on the lars of heat and electricity : physiological phenomena, on the laws of physics and chemistry,
exact relationship to, and is an informing bond for, all the parts, and which expounds the being and working of the whole thing, and in that law we shall have $a$ Science of the thing. If the Law, however, be only hypothetical, viz., that which would expound the thing if we knew the Law itself were true, or which we assume to be true and universal, because it serves so well to the extent that we can apply it, then is the science of that fact only inductive or empirical; viz., good or valid so far as the induction of particular experiences has gone. But
if we can take the Larr, and find it to be in complete accordance with the Idea which has been determined by an Eternal Principle, then have we a Science for the Lawr, as well as for the fact in the Law, and such becomes a transcendental or rational science of a reality. We know both that the fact is, and hoo it is. The reality has a Law determined in an Eternal principle; and thus both Law and Idea come together in exact corres pondence. The only valid criterion for true science is, then, this determined correspondence of Idea and Lav. (1).

[^32]child begins to acquire Science in the pure and exact meaning of the term, and it is with these Numbers, or with the recognition of the Spirit or Meaning of these Numbers, enlarged into the Universal Principles of all Being, that the Thinking World will pass from its infancy-the Stage of mere-Observa-tion-and-vague-Speculation-to an Exact Comprehension of the Universe. It is at these Simple Beginnings that the Scientific World, imitating the progress of the child, must make its commencement of the New and Exact and All-Embracing, or Universal Scientiiic Career. "Unless ye become as little children, ye can in no wise enter into the Kingdom of Heaven."
and their own laws in addition. The phenomena of human society obey laws of their own, but do not depend solely upon these: they depend upon all the laws of organic and animal life, together with those of unorganic nature, these last influencing society not only through their infuence on life, but by determining the physical conditions under which society has to be carried on. - Chacun de ces degrés successifs exige des inductions qui lui sont propres; mais elles ne peuvent jamais devenir systématiques que sous l'impulsion déductive résultée de tous les ordres moins compliqués.' (1).
3. "Thus arranged by M. Comte in a series, of which each term represents an advance in speciality beyond the term preceding it, and (what necessarily accompanies increased speciality) an increase of complexity-a set of phenomena determned by a more numerous combination of laws; the sciences stand in the following order: 1st, Mathematies; its three branches following one another on the same principle, Number, Geometry, Mechanics. 2nd, Astronomy. 3d, Physics. 4th, Chemistry. 5th, Biology. 6th, Sociology, or the Social
7. "It will make no difforence which is first found, the Law or the Idea. The fact taken will ordinarily lead to the Law, and the study of the Law in the light of reason will bring out the Idea, and thus the science will be learned, or the Idea may be first attained in the reason, and the fact made from it, and this put as law into the fact, and thus the science will be created. But whether as creator or learner, in each case the Idea in the reason, and the Law in the fact, are both attained, and found to be in complete accordance. The Inventor
of the steam-engine first had the Idea, the observer first had the Law, but, both came to have Idea and Law in known correspondence.
8. "The appearance in consciousness may be termed knowledge; but it is only the philosophical interpretation of the process by which this knowledge or appearance in consciousness is attained, that can properly be termed Science. And, moreover, since it is not from experience that we seek to attain our stubjective idea-which could only attain to the affirmation that so our form of cogni-
(i) "Systùme de Politique Positive," ii. 36.
202. The Number One (1) is the Head of the Oha-Number Series of the Cardinal Numbers; the Number Two ( 8 ), of the Even-Number Series ; and the Number Tirree (3) of tho Integrated or Composite, or Reconciliative Series. Conjointly they are, therefore, the Heads and Representatives, or, otherwise, the Joint-Head-and-Representative, of the Cardinal or Chief Series of Numeration-the Grand Domain of Abstract Mathematical Science.

In a more general sense the Number Ore (1) represents itself alone, as the Simple Absolute Unit. The Number Two (2) is then representative of all Plurality, or the Spirit of Plurality, which is Pluralism. This is in turn all Variety or

Science, the phenomena of which depend on, and cannot be understood without, the principal truths of all the other sciences." [Ethics was subsequently added as a 7th.] "The subject-matter and contents of these rarious sciences are obrious of themselves, with the exception of Plysics, which is a group oí sciences rather than a single science, and is again divided by M. Comte into five departments: Barology, or the science of weight; Therimology, or that of heat; Acoustics, Optics, and Electrology. These he attempts to arrange on the same principle or increasing speciality and complexity, but they hardiy admit of such a scale, and M. Comte's mode of placing them varied at difierent periods. All the five being essentially independent of one another, he attecied little importance to their order, except that barology ought to come first, as the connecting link with astronomy, and electrology last, as the transition to chemistry.
4. "If the best classification is that which is grounded on the properties most important for our purposes, this classification will stand the test. Ey
tion is ; or, that so in future it must be, on the hypothetical assumption that all experience must be uni!orm; and in this way merely an inductive Science, which is incompetent to exclude skepticism from its very foundation-but we secis this subjective idea as transcerdental, and conditional for any experience in knoving, and such as that according to it only is the process of intellectual agency at all possible, and thereby attaining to a rational science which mar expel all skepticism from both founda. tion and superstructure; it becomes necessary that we attain to a position which
transcends all experience, and in that pure region intelligentiy and demonstrably possess ourselves of the conditioning idea, determinative of how a knowiedge in the sense, and in the understanding, and in the reason, respectively, is possible to be, and, therefore, if such knowledge ever actually is, how it must be.
9. "But, further, inasmuch as such suljective idea is but a mere roid thought, and only determinative of how it is possible a knowledge may be in either one of the faculties of the sense, the understanding, and the reason, it

Difference whatsoever. The Number Three (3) then represents the Higher Uxity of the Primitice Absolute Unityrepresented by One (1)-with the Variety or Differencerepresented by Two (2). In other words, One (1) is the Type of Simple Unity ; Two (2), the Type of Variety; and Three (3), the Type of the nero and compound Unity of the Simple Unity with the Variely. This is that Infinite Unity in Variety, and Variety in Uxitt, which, it will be demonstrated, is the Positive Type of every Existence and Movemext whitsoever from the least to the greatest. For this last, and Composite Idea, I hare adopted the new technical expression Uni-Varietr. This subtle Complesity is what
placing the sciences in the order of the complexity of their subject-matter, it presents them in the order of their dificultr. Each science proposes to itself a more arduous inquiry than those which precede it in the series: it is therefore likely to be susceptible, even finally, of a less degree of perfection, and will certainly arrive later at the degree attainable br it. In addition to this, each science, to establish its own truths, needs those of all the sciences anterior to it. The only means, for example, by which the phrsiological larss of life could hare been ascertained, was by distinguishing, among the multifarious and complicated facts of life, the portion which physical and chenical laws cannot account for. Only by thus isolating the effects of the peculiar organic laws, did it become possible to discorer what these are. It foilows that the order in which the sciences succeed one another in the series, cannot but be, in the main, the historical order of their derelopment; and is the onls order in which they can rationally be studied. For this last there is an additional reason: since the
becomes necessary that we go further, in the cass of each, and attain, in the actual facts of such different kinds of cognitions, a manifest law running through the facts, and binding them up in srstematic order ; and then also determine that this law in the facts, is the exact correlative of that determined idea which it had already been found must regalate all possible experience in knowing." (1).
10. "The Inductive Process is that by which a general larv is mefred from particular facts. This consists generally
in making a number of suppositions or guesses as to the nature of the law to be discorered, and adopting the one which agrees with the facts. The law thus adopted is usually further rerified by making deductions from it, and testing these by experiment ; if the result is not what was anticipated, the expression of the law is modified, perhaps many times in succession, until all the inferences from it are found in accorduance with the facts of experience.
11. "Deduction, which is the inverse of Induction, consists in reasoning down-
one of the German Metaphysicians, Herbart, has shrewdly perceived to be the ultimate Law of Being, and what he has called with great propriety, despite the paradox-struggling with the difficulty of expression-the Identity of the Identity withe tife Non-Identity.
203. From these Three Primitive Numbers are then derived the Three Primitive Laifs or Fundaniental Principles of Universology, which may now be formally introduced and defined as follows:

1. The First Lat of Universal Being (in the Natural Order of Precedence) has relation to the Number One (1), and may be regarded as the Spirit of One; whence it is denomi-
more special and complete sciences require not only the truths of the simpler and more geueral ones, but strll more, their methods. The scientific intellect, both in the individual and in the race, must learn in the more elementary studies that art of investigation and those causes of proof which are to be put in practice in the more elevated. No intellect is properly qualified for the higher part of the scale, without due practice in the lower.
2. "Mr. Herbert Spencer, in his essay entitled "The Genesis of Sciẹnces," and more recently in a pamphlet on "The Classification of the Sciences," has criticized and condemned M. Comte's classification, and proposed a more elaborate one of his own ; and M. Littré, in his valuable biographical and philosophical work on M. Comte ('Auguste Comte et la Philosophie Positive') has at some length criticized the criticism. Mr. Spencer is one of the small number of persons who, by the solidity and encyclopecical character of their knowl-
wards from a law which has been established by induction, to a system of new facts. In this process the strict logic of mathematics is employed, the laws furnished by induction standing in the place of axioms. Thus all the facts relative to the movements of the heavenly bodies have been derived by mathematical reasoning from the laws of motion and universal gravitation." (1)
3. The abore definition of Deduction exhibits it as it is ordinarily understood and admitted in the Scientific world-as the hand-maid of Induction. Deduction, in the higher Universological sense, is
on the contrary, a derivation of truth, not from laws established by Induction as commonly understood (although this is Deduction in the lower sense), but a deduction of truth from laws discovered as of inherent and universal necessity; lience from laws wrought out of the pure rationality, with no other facts necessarily involved than the facts within the consciousness itself. These are the Unmade Principles spoken of by Hickok. When these are discovered and rationally demonstrated, a revolution occurs, and Deduction asstumes legitimately and in respect to Positive Science itself, the
nated UNISM, from the Latin Unus, ONE. It ramifies, or permeates, constitutively, all Thought, all Existence and All Movement; and is one of the TWO organizing Forces, or Fuctors, or Privciples of all Things in the Universe of Matter and Mind.
4. The Second Laiv of Universal Being (in the Natural Order) has a similar relation to the Number Two (\%), and may be regarded as the Spirit of Two; whence it is denominated DUISM, from the Latin Duo, Two. It likewise ramifies, or permeates, constitutively, all Thought, all Existence and all Movement; and is the remaining one of the TWO Antagonistic but Co-operative organizing Forces, or Factors,
edge, and their power of co-ordination and concatenation, may claim to be the peers of M. Comte, and entitled to a vote in the estimation of him. But after giving to his animadversions the respectful attention due to all that comes from Mr. Spencer, we camot find that he has made out any case. It is always easy to find fault with a classification. There are a hundred possible ways of arranging any set of objects, and something may almost always be said against the best, and in favor of the worst of them. But the merits of a classification depend on the purposes to which it is instrumental. We have shown the purposes for which M. Comte's classification is intended. Mr. Spencer has not shown that it is ill-adapted to those purposes ; and we cannot perceive that his own answers any ends equally important." (1). (c. 1, t. 270).
higher rank as compared with Induction; and that minor Deduction, which is now the servant of Induction, will then be recognized as the subdominance or minor presence merely of the superior principle within the inferior domain. The whole ground is covered, however, by the use of the more incisive term, Analysis, instead of Induction; for the highest necessary laws are, equally with empirical laws, discovered in the facts and arrived at by Analysis. It is then, however, the Analysis of what must be in the nature of things, and not merely of what is, and of what is known by the observation of phenomena.
5. Principics are discovercd by Inảuc-
tion, the Process of which is also called Analysis. Principles are then applied Deductively, and this Process is also called Synthesis. But a Premature Synthesis, or rather a long succession of Premature Syntheses, is sure to be attempted before the Process of Analysis is absolutely completed. The Generalizations so effected are ObSERVATIONAL Genimalizations; are necessarily imperfect and partially erroneozs; and hence tend to bring Deduction as a Method into disrepute. Analitital Generalizations are, on the contrary, such as result from the radical and exhaustive preliminary application of Analysis, [Jltra-Inductive Method], and
[^33]
## or Prinompes of all Things in the Universe of Míalier of Mind.

3. The Third, Law of Universal Being has relation to the Number Tireee (3), and may be regarded as the Spirit of Three ; whence it is denominated TREISM, or TRINISM, from the Latin Ties, Theee. It is either ithe Conjoint, and Blendecl, and Absolute, Ground, which yields UNISM and DUISM by Anclysis ; or otherwise viewed, it is the Product of the Synthesis of those two Factors, which are inherently and inexpugnably united in it. TREISM-repeated in a higher sense as Tre-Unism or Tri-Unism-or these two collectively as Trinism,-is therefore identical with Real Berng

Commentary, i. 203. 1. Uxism and Dutsm are the only A7stract and Anclyitical Principles of Being-Priciciples in the Transcendental sense of the term-the Absolute Rational Prime Elements of Being. Trcism and Triunism, or, collectively, Trnisur, are Pervciples in an opposite and Concrete sense, as Aggregate Estimates or Generalizations of Being; hence Actual or Practical Prime Elements-Starting-Points in the Natural Order of Obscriational Investigation merely. For this latter variety of principles the termination -ISMA is more specifically technical. The Three Principles of Uni-- versology are therefore strictly, 1. Unisay, 2. Duism, and 3. Thinisusi.
such alone therefre as can foumid the Uitimate, Legiiimate, and truly Scientific System of Deduction. (t.321).
14. The following admirablo definitions of Axalysis and Shatiesis in these senses, are given by Swedenborg : "There are two tisually received ways or Methods for discovering Truths the Synthetic and the Analytic. The Synthectic commonces from Principles and Causes, and passes therefrom to Phenomena and Effects, thus proceeding from the Prior to the Posterior ; from Simple to Compounds; from Superior to Inferior, from Interior to Exterior ; or, what amounts to the same thing, from the Universal to Singulars, and consequently to Experiences confirming prior things. The Analytical Method, on the other hand, rises from Phenomean and Effects to

Causes, and evolves from them Princrpues, consequently evolves Universals from the Experience of Singulars; Interior things from the Exterior; Simples from Compounds; in a word, the Prior from a Posterior. Thus Analysis as a method of proceeding is the Inverse of Syuthesis." (1).
15. Premature Synitesis, [Deduction], the Anticipatory Method, is fui Method, or Procedure, what Synstasis is in respect to Existence. The Parallelism is shown in the following Table:

TABII里1。
Existence-sitatic. Jethor-Mroic.
3. Syntitesis 3. Synthesis, - Deductive Method.
2. Axalysis 2 Amalysis, - Inductive Metiond.

1. Spistisis 1 Pzuniture: Symtirisis,-Anti(t. 211 ). ciputory Jtethoot.

[^34]or Concrete Existence itself. Hence it is rather, strictly speaking, the simple fact of Being, than a Law in that Abstract Sense, in which the term is applicable to Unism and Duism. In its lowest form it is the Apex of the Conjunction of the two underlying abstract Laws or Principles-and contrariwise, it is, then, the germinating point or primary cell of all the compound forms of Existence-or, in other words still, it is the Source of all actual Evolution above it, in the Concrete or Real World. (c. 1).
204. From these Three Laws or Principles, the whole Universe is wrought out, by their successive repetitions in new forms of manifestation, in infinite variety, but in Serlal Order, and traceable Regularity of Structure from the Lowest to the Highest Domain ; from the Basis of the Scientific Pyramid in the Abstract Mathematics, up to its Culminating Point in Theology, or the Science of God. a. 1-20.

Annotation t. 204. 1. The Doctrine of Unism, Deisy and Trinism, as the Three Fundamental and Primordial Principles of All Things, along with the Science of Universology resulting therefrom, is no other than the re-discovery, and the carrying out-at the top and height of Modern Philosophy and Sci-ence-of the Philosophical Principles striven for, and indeed discorered, so far as discorery was compatible with the general derelopment of that day, by Pythagoras, twenty-four hundred years ago.
2. The following extended account of the Pythagorean Philosophy of Numbers is extracted from Prof. Ferrier's Lectures on Greek Philosophy. It is expanded, perhaps, somewhat, by the genius of Ferrier, and so made eren more approximate to the bases of Universologs. It will throw much light on the subject, and will save explanations which I should otherwise be required to add. I shall, howerer, precede this account by other condensed extracts from this work
of an acute thinker, upon the General Purposes of Philosophy and the Nature of Truth, as these preliminary extracts will contribute to the better understanding of the special subject.
3. "Plilosophy is the pursuit of Truth.
"This is the first and simplest, and vaguest conception and definition of Philosophy which we can form. This definition calls for some explanation as to what we mean by Truth.
"What then do we mean by Truth?
"I refer to the distinction of Truth into Relative and Absolute. First of Truth as Relative. A Relative Truth is a truth which is true for one mind, or for one order or kind of minds, but which is not or may not be true for another mind or kind of minds. All Sensible Truth" [truth of Observation, whether by the Esternal or the Internal Senses, or, in other phrase, by Experience] "is or may be of this character.
4. "If our eyes were constructed like microscopes the world would present to
205. This Congeries of Universal Principles, or of Principles governing throughout the Total Universe of Matter, and Mind, and Movement, institutes a true and legitimate Deductive Method for all future Scientific Investigation, counterparting and co-operating with, while also rectifying and governing, the Baconian Method. As Laws or Principles, they hare an equal exactitnde, an immeasurably wider significance, and a correspondingly higher Scientific value, than Newton's Law of Gravitation, the Three Laws of Kepler, or any other of the Laws of a limited application heretofore discovered in the Sciences.
206. In their Tri-Unismal Aspect they may be regarded as One Lazo, the Unitary or Serial Latw of all Science: which distributes all the Departments of Being in the Universe, all
us an aspect rery different from that it now wears; if they were formed like telescopes, the spectacle of the starry hearens would be wonderfully changed. If the Sensibility of our retina were either increased or diminished, the whole order of colors would undergo a corresponding variation. So, too, in regard to sounds and tastes: alter the organism on which these depend, and what was once true in regard to them would be true no longer ; the thunder might sound soifter than the zephyr's sigh, or the lorer's lute might be more appalling than the cannon's roar. So, too, in regard to touch : if our touch were strong and swift as the lightning's stroke, the most solid matter would be less palpable than the air. So purely Pelative" [Individual or Particular] "is the truth of all our Sinsible impressions" [External or Internal] " truths merely in relation to us, and to beings constituted like us, but not necesamilly truths to other orders of intelligence.
5. "Secondly, of truth as Absolute. Absolute Truth is truth which is true for all minds, for all orders of intelligence;
not truth placed altogether out of relation to intelligence, for that would be equivalent to saying that the highest truth could not be apprehended by the most perfect intelligence, not even by omniscience.
6. "Relative Truth is truth which exists only for some, but not necessarily for all minds; while Absolute Truth is that which exists necessarily for all minds. We shall find hereafter that this distinction is of great service to us in leading us to understand the grounds upon which philosophers generally have set so little store on the truth of our mere sensible impressions. No philosopher ever denies that the intimations of the senses are" [or may be] "relatively true, or that we should place complete confidence in them as presentations relatively true. But many have denied that these intimations were absolutely true, were ralid of necessity for all Minds. The grounds, however, on which these philosophers have proceeded have been frequently mistaken. Hence many perplexities have arisen, and hence speculative thought has been often unjustly charged with
the Special Sciences relating to such Departments of Being, and all the Items, Details and Particulars, Things, Aspects, Facts and Phenomena, within each Department and Science, down to the minutest shade of their discriminations from each other.

> More simply defined—

## UNISM is the SPIRIT of the Number ONE; DUISM is the SPIRIT of the Number TWO; and TREISM is the SPIRIT of the Number THREE.

Tri-unism is then the congeriated Unity of these three Principles, in their back-lying and mystical identity,-or, when functionating as One. Trinism is the indifferent or collective expression for Treism and Tri-unism.
207. In a still more condensed way, this entire Congeries of Principles, with the Science and the Philosophy to fiow from
inculcating absurdities, which existed nowhere but in the misapprehension of its accusers." (1).
7. "The Attainment of Absolute Truth, as truth as it exists for all intellect, is the principal, though not the exclusire aim of Philosophy." "This is the point at which all the higher metaphysicians of every age and of every nation hare aimed, and at which it is their duty to aim (however far short of the mark their efforts may be doomed to fall), if they would be true to their vocation." (1).
8. "Here is" [then] " where the distinction lies: Relative Truth is truth which comes to us by virtue of our Particular nature as human intelligences; Absolute Truth is truth which comes to us in virtue of our common nature, as Intelligences simply, what is here looked to being merely the circumstance that we are intelligences at all, and not the circumstance that we are this or that particular kind or crder of intelligence. Let us suppose a number of intelligences

[^35]them, is signified by the Clef 1 ; 2 ; previously introduced, ( $\tau .123$ ), and contrasted with the Clef $1 ; 0 ;$ (t. 125), as that which has presided over the German or Transcendental School of the Metaphysics.
208. Unism coincides with what has been loosely denominated Integration ; loosely, because frequently a Primitive State prior to Differentiation, and the ultimate Synthesis subsequent to Differentiation, are confounded, under this term, as if they were the same.
209. Duism coincides with Differentiation. Both are related to the Number Two (2), inasmuch as Two (2) stands representatively for all Plurality, and hence for Pluralism, which is, as stated above, all Variety or Difference. The technical
9. "If it be true that there is no Common nature, no Universal faculty in all intelligence, no point in which all minds agree ; in that case it must be admitted that the objection is fatal to our definition of Philosophy. In that case man can have no dealings with Absolute and Universal Truth; the only truth of which he can be cognizant must be relative and particular. But observe the coutradiction in which we get involved if we take up this position," etc. (1). "A diffrence in the Truths justifies us in maintaining a difference in the Faculties or Organs by which they are apprehended." (2). "Say that Reason is the Universal Faculty, the faculty of truth as it oxists for all intelligence, and that Sense and Understanding are divisions of the Partimular Faculty, that is, of the faculty of truth as it exists for some, but not for all intelligence, and light breaks in uron the distinction" between the Pare Reason and the Understanding. "You begin to comprehend something of the constitution of your own mind, and also of mind universally." (3).
"Man's faculty of necessary" and unirersal "thought is properly called his Reason. So that the definition expressed shortly is this : Philosophy is the pursuit of Absolute Truth conducted under the direction of the Reason. But the definition under this compendious form expresses a mere vague truism, unless you keep in mind what we mean by Alosolute Truth, and aiso what we mean by Reason." (1).
10. "Throughont the whole history of Plilosonlly we find Sensible Knowledge" External or Internal, "held in but slight esteem. The truths of the Scases are denied to be truths at all in the proper and strict acceptation of the word Truth, and we are referred away to some other form of Truth of which no very clear account is given. To the young student of Philosophy this is a most disheartening and perplexing procedure. He cannot understand why the the truths of sense should be sct aside as of little or no account, and why another set of trut?s, which seem to him far less" immediate " and satisfactory,

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## scientific designation of the Principle of Differentiation is there-

 fore Duism.210. For Integration in its Primitive sense, the Principle of which is Unism, I shall sometimes employ technically Integrism, which will then be discriminated from Integration. This last will be employed for the Second meaning of Integration, confounded with the first by Spencer, and called by Young, Co-ordination. This is Synthetic, or the Return to Unity subsequent to Differentiation. It is therefore coincident with Treism. The composity of these two aspects is the Trinism ; in which sense Integration also occurs (t. 208).
should be brought forward in their place. And in no work, either on Philosophy or its History, does he find any very satisfactory reason assigned for this preference. But let him be told and called to consider, that the truths of the Senses are not necessarily truths for all minds, but only truths for beings with senses like ours-are, in fact, only truths for some intelligences; and he will no longer be surprised at the disparaging tone in which Sensible Truth is spoken of in the History of Philosophy. He may be of opinion that Philosophy is Frong in this, inasmuch as he may think that all truth for man resolves itself into mere sensible truth. (a. 2, c. 32, t. 136). But whether Philosophy be right or wrong, the student now understands distinctly the ground on which Philosophy proceeds in holding as of little or no account the Knowledge which comes to man through the Senses, .... affixing a brand on all Sensible Knowledge, stamping it as comparatively invalid and irrelevant." (1).
211. "Philolaus and Aristotle are the Principal Sources of the Pythagorean Philosophy in its earlier form.
212. "Aristotle lays down the general principle of the Pythagoreans in the following terms. 'Number,' he says, 'is, according to them, the essence of all things; and the organization of the Universe, in its various determinations, is a harmonious Srstem of Numbers and their relations.' 'The boldness of such an assertion,' says Hegel, 'impresses us as very remarkable; it is an assertion which strikes down at one blow all that our ordinary representations declare to be essential and true. It displaces Sensible existence, and makes Thought and not Sense to be the criterion of the essence of things. It thus erects into substance and true being something of a totally different order from that form of Existence which the Senses place before us.' (Werke, XIII., 237, 238.)
213. "What Pythagoras and his followers meant precisely by Number it is not easy to sar. One point seems to be certain, that Number, in the Prthagorean sense, denoted Law, Order, Form, Harmony. It is said that Pythagoras was the first who called the world Cosmos, or Order, thereby indicating that Order was the essence of the Unirerse-that Larr,

[^37]211. For these several States we may also employ, technically, the three terms exhibited in the following Table:


$\left.\begin{array}{c}\text { TRI-UNISM. } \\ \text { (=Integrality } \\ \text { Integralism.) }\end{array}\right\} \begin{cases}\text { 3. Synthesis, } & \text { (Integration, Treism). } \\ \text { 2. Analysis, } & \text { (Differentiation, Duism). } \\ \text { 1. Synstasis, } & \text { (Integrism, Unism). }\end{cases}$
212. Synstasis is the State of any Subject prior to Analysis, that condition of things to which the Analysis is about to be applied, the primitive Integrism, Unity or Identity. Analysis is the dissolving, sundering or differencing of the parts or properties. Synthesis is the putting together of the primitive Synstasis with the subsequent Analysis; so that the Synstasis shall not be a complete annihilation by the con-
or Number, or Proportion, or Symmetry, was the Universal Principle of All Things.
14. "If we compare this position with that occupied by the Ionic philosophers," the Earth-Air-Fire-and-Water School, "we shall perceive that it is an advance, an ascent, to some extent at least, from Sense to Reason. In fact, the great distinction between the Senses and the Reason here begins to declare itself. To revert for a few moments to the Ionic Philosophy. This philosophy is an advance on Ordinary Tliinking ; Ordinary Thinking is held captive by the Senses. It accepts their data implicitly, or without question. In the estimation of Ordinary Thinking things are precisely as they appear ; and their Diversity is more attended to than their Unity. In a word, Ordinary Thinking has eyes only for the Particular, and is blind, or nearly so, to the Universal. The Ionic philos ophy rose into a higher position than this. It aimed at Unity; it sought for a Universal amid the Diversity of Sensible Things; and this was an advance, a step in the right direction.....Still this plat-
form is far from being the platform of Reason. The Unity was sought for by means and under the direction of Senss iteslf. It was a mere Sensible Universal water, as infinite matter or air; in short it was something in itself material, and therefore something which instead of being itseif The Universal in all things, did itself require to be brought under a Universal, or reduced to Unity under a higher Principle.
15. "Number is a truer Universal than either water or air, or any other sensible thing. It is possible that it may not be an adequate conception of the Universal in All things, .... but it is certainly a nearer approximation to this than any conception which we find set forth in the Systems of the Ionic philosophers. The test is this: Supposc you had to explain something about the Universe to an intelligence different from man' s , unless that intelligence had senses similar to man's, he could not understand what you meant by water, or air, or earth, or fire, or color, or sound, or heat, or cold ; but whatever his senses were, or whether he had any senses or not [sic],
densation of all differences, and so that, on the other hand, the Analysis shall not be an absolute diffusivenes's, destructive of all Unity. Tri-Unism is the Complete Whole.

The Principles here named are not mere Methods of our own thinking as are the terms Analysis and Synthesis, as these have been employed in Mental Philosophy; nor are they Methods of our own Doing as the same terms Analysis and Synthesis have been employed to mean in Chemistry. They are here so enlarged as to mean, Universal States-and-Processes, the Laws of Universal Cosmical Evolution, the Ways, in Theological terms, in which God proceeds in the work of Creation and Destruction.
213. The Numbers One (1), Two (2), and Three (3), have been, so far, treated as if they were directly representative of
he would understand what you meant by Number, he would know what One meant, and what Many meant....Unless he could be made to understand this....it seems to me that he would not be an intelligence at all. And therefore it may be said that Number is a true Universal, that is to say, it is a necessary thought; it expresses some thing which is the truth for all, and not merely the truth for some intelligence. At any rate it is a truer Universal than either water or air, or any other sensible thing.
16. "We are now able to understand the apparently very paradoxical assertion of the Pythagoreans, namely, that Number is the Substance of Things, the Essence of the Universe; and we are able, moreorer, to perceive in what sense this doctrine is true. The whole paradox is resolved, the whole difficulty is cleared, by attending to the distinction to which I have so often directed your thoughts, the distinction between truth for All, and truth for Some ; or, otherwise ex. pressed, between the Universal Faculty in man and the Particular Faculty in man.
17. "My reason, then, for holding that Number is an object of pure thought rather than of sense is this: That every sense has its own special object, and is not affected by the objects of the other senses. For instance sight has color for its object, and can take no cognizance of sound. In the same way hearing appre hends sound, and takes no cognizance of color. In like manner we cannot touch colors or sounds, but only solids. Neither can any man taste with his eyes, nor smell with his ears. If Number, then, were an object of sense, it would be the special object of some one sense ; but it is not this. It accompanies our apprehension of all the objects of the senses, and is not appropriate to any sensible objects in Particular. It is not, like all the other objects of sense, the Special object of any one sense, and therefore I conclude that it is not an object of Senso at all, but an object of Thought or Reason. When we look at one color what we see is color, what we thinlo is one, i. e., number ; when we look at many colors, what we see is color, what we think is many, $i$ e., number. This distinction, the distinction by which Num-
all the aspects of Number. They belong, nerertheless, to one particular class of Numbers, namely: the Cardinal-Integral-and-Determinate, or -Exact Numbers, which must now be discriminated from other classes of Numbers in various directions.
214. The Cardinal Numbers, Hinge-like or Piroted, (from the Lat. cardo, A hinge), are, indeed. from the Scientific point of view, the principal domain of Numbers. They are, however, as we have already noticed, directly contrasted with the Ordinal Numbers, of which the particular Numbers, First ( $1^{\mathrm{st}}$ ), Secoxd $\left(2^{\text {nd }}\right)$, and Third ( $\left.3^{\text {rd }}\right)$, are the three Heads, or Conjoint-Threefold-Head. These are, nevertheless, represented by the One (1), Two (2), and Three (3), by virtue of
ber is assigned to Reason and not to Sense, is, I think, an important aid towards understanding the Pythagorean philosophy.
15. "Number, then, or Form, and not Matter, as the Ionic philosophers contended; Number and not The Numberless or Apeiron of Anasimander, is the true Cniversal, the Common Ground, the Ultimately Real in All Things. With Prthagoras, Form or Number is the Essential, Matter the Unessential; with the Ionics, Matter is the Essential, and Form or Number the Unessential. In their respective positions the two Schools stand diametrically opposed. But the Prthagorean is certainly a stage in adrance of the Ionic.
19. "'Every thing,'" says Philolaus, a disciple of Pythagoras, "' which is known has its number, for it is impossible either to think or know anything without num. ber.' He thus makes Number the Source and condition of intelligence, and the ground of the intelligible Cniverse. But the following is even more important. 'It is necessary,' sars Philolaus, 'that everything should be cither Limiting or Unlimited, or that ererything should be both Limiting and Unlimited. Since,
then, it appears that things are not made up of the Limiting only, nor of the Unlimited onlr, it follows that each thing consists both of The Limiting and The Unlimited, and that the world, and all that it contains, are in this way formed or adjusted.' This is a remarkable extract, for it shows that the Prthagoreans had to some extent anticipated the great principle of Heraclitus, namely that erery thing and every thought is the Untty or Conciliation of Contraries; a principle, the depth and fertility of uchich have never to this day been rightly apprehended or appreciated, far less fathomed and exhausted.
20. "In his dialogue entitled Philebus, Plato touches on this Pythagorean doctrine. For the word perainonta, which is Philolaus' expression for The Limiting, he substitutes peras, The Limit : and the Union of the Two (the Limit and the Unlimited) he calls Mikton, The Mired. So that, according to Prthagoras, (and Plato seems to approve the doctrine), every thing is constituted out of the peras" [Dersm] "and the apsiron" [Cntsm,] "the Limit and the Unlimited" this last being the Cnitary or Continuous Ground of Being ; that which Being
the Scientific Supremacy of the Cardinals over the Ordinals, and by virtue of that Repetitory Analogy which exists, as we have seen, between them. (t. 155).
215. The Cardinal-and-Ordinal-Numbers-collectively, as Integers or Whole Numbers, constituting The Grand Integral Series of Numeration, then stand contrasted with the total Fractional Series of Numeration, of which the Denominators are Ordinal, and the Numerators Cardinal, in form.
216. The Integral and Fractional Series of Regular or Mathematical Numbers then constitute collectively what I denominate technically The Determinate Series of Numbers, as contrasted with an Indeterminate Series which will now be noticed.
would be if it had no Limits; The In. finite; "and the result is the Mikton, that is, the union of the two. This principle, afterwards applied to morals, led to Aristotle's doctrine of the mesotēs" ["the golden mean"], " or of virtue as the mean between the Extremes. The peras in the Physical World was a limit or law imposed on the infinite lawlessness of Nature: the peras or mesotēs in the Moral World was a limit imposed on the infinite lawlessness of Passion.
21. "To get a further insight into this matter, let us consider the conception of the Mikton. This, I conceive, is equivalent to The Limited. Now let us ask what it is, in any case, that is limited? Perhaps you would say that it is The Limited that is limited. But that will be an inept answer. What would be the sense of limiting The Limited, the already limited? That would be a very superfluous process. Therefore, if the Limit is to answer any purpose, it must be applied not to The Limited, but to The Unlimited; and this accordingly is the way in which the Pythagoreans apply it: The Limit is an Eleme:t in
the Constitution of The Limited; The Unlimited being the other Element.
22. "Here is another way of putting the case. Take any instance of The Limited, any bounded or limited thing, a book, for example. No one can say that the book is without limits. The Limit, then, is certainly one element in its constitution. But is the Limit the only element? That certainly cannot be maintained. There is something in the book besides its mere limits. What is that something? Is it The Limited? Clearly it is not; because The Limited is the total Subject of our analysis; and therefore, to hold that The Limited is the other element-would be equivalent to holding that the whole subject of the analysis was a mere part or element of the analysis. ...This would be analyzing a total thing into that total thing and something else. But if The Limited cannot be the other term of the analysis, that other term must be The Unlimited. What else can it be? The Limited, then-in this case the book-consists of the Limit and The Unlimited, and these are the two Elements which go to the
217. Indeterminate Numeration has for its Three terms ONE, MANY, and ALL (Beginning, Middle, and End). This kind of improvised and all-embracing, but indefinite and unsatisfactory Numeration, has for its Analogue, in the whole field of Knowing, that which is the most definite thing attained to in that Primary Speculative Philosophizing which precedes Exact Science, and which strives by a few single leaps of Generalization to embrace and exhaust the Universe, without the detailed labor of attending specifically to its Parts, and to the Laws of the Relationship of those Parts to each other. It is remarkably in point, to observe, in this connection, that Kant, to whom belongs the honor of introducing the method of Proximate Exactitude into Metaphysics, goes no further

Constitution of everything. Suppose the limits-for example, the two ends of a line-taken away, and no ends left, that which would remain would be The Unlimited. But that cannot be conceived, ycu will say. Certainly it cannot. But it can be conceived to this extent, that if that part of a line which we call its ends or limits, be taken away, and no new limits posited, then the remaining part, considered in and by itself is necessarily Unlimited. This Element, which truly cannot be conceived without the other Element," the two are distinguishable but not separable, "is the apeiron of the Pythagoreans; and it cannot be conceived for this reason, that Conceptron is itself constituted by the Union or Fusion of these two Elements, The Limit and the Unlimited. Such is the Pythagrean doctrine, and it seems to me to
be not only perfectly intelligible, but also perfectly true.
23. "Another form which the Pythagoreans employed to express their principle was the expression monas, The One" [Unismal,] " and aoristos duas, The Indeterminate or Indefinite Two" [DuIsmal.] "Of these terms the latter in particular is very obscure, and has been very insufficiently explained. I will endeavor to throw what light upon them I can out of my own reflections. First of all, these terms seem to be merely another form of expression for the peras and the apeiron; the monas or One is the peras or Limit ; the aoristos duas is the apeiron, The Unlimited and Indeterminate. Everything in being limited is One. This is expressed by the term monas which stands for the Sameness or Identity in Things (1) ; but the Diversity

[^38]than this, and makes this precise distribution of the elements or categories of Number, namely, into One, Many, and Alla distribution too vague entirely to have any practical relation to Numbers in respect to their Scientific exactitude.
218. It does not follow, however, as Echosophists, going to the opposite extreme, are prone to suppose, because these Generalizations of Number are not fitted to their purpose, that they are wholly useless. We could not have a language adequate to all our wants without the words One, Many, and $A l l$, any more than we could discard the definite or determinate Heads of Number, One, Twoo, and Three. It is necessary, however, to understand that one of these two sets of terms is Generalizing and Vague ; and the other Specializing
in things is inexhaustible; and this capacity of infinite diversity is indicated by the term aoristos duas, indefinite difference ; so that, according to the Pythagoreans, the general scheme of the Universe, as regarded by pure reason, is Identity, combined with a Capacity of Infinite Diversity. Neither of the terms has any meaning out of relation with the other.. . . the true conceivable Limit"'[ed], " whether considered as a thought or a thing, is the result of their combination.
24. "We shall perbaps get more light thrown on these terms if we consider them under a purely arithmetical point
of view. It might be thought that these words, monas and aoristos duas simply signified One and Two, or One and Indeterminate Two. But this is not all the meaning which the Pythagoreans attached to them. According to them every number consisted of these two parts; the Monas and the Duas were not Numbers, but were the mere Elements of Number. This seems a perplexing position, yet it is susceptible of explanation. For example, every number is different from every other number; 1 is different from 5,5 is different from 10,10 is different from 20 and from 100 , and so on. But erery number also
unitive in the same manner as Selfishness, (monism, egoism) is destructive of the Common or Indeterminably Plural, really the Unitary, interests of Society. The coristos duas, the Indeterminate Plurality of the Masses, is on the other hand Uxismal, or relates to the Unity or Collectivity of Society, as epposed to Individuality. All of this precision, and thousands of similar minute but important discriminations will occur in the ulterior and detailed study of Universology. They are hardly in place here, and this is only noticed to obriate a positive ambiguity. This interchange of meanings was probably not observed by the Greeks, and the two sets of terms were doabtless employed as substantial Equivalents, as they are expounded here by Ferrier. There is, indeed, a representative monas whence comes the term monarchy (monas, single, and archē, government), which stands for the Unitive or Common Interests (Unismal). The difference in the two views is as that between "The Sovereignty of the Individnal" [i.e., of every individnal] which is the ultimatum of Democracy, and Sovereignty in the ordinary representative sense, as that of a monarch. In the more current understanding of the subjcet, the monas is rightly identified with the peras, as in this Annotation No. 23, and with the Reason the Conscious Centre of Limitation, or the Limiting and Regulating or Monarchical Faculty; and the aoristos duas with Sense or the Senses.
and Precise ; and to employ each in its true place. One, Two and Three hold the same representative relationship to Echosophy, and especially to the new Sciento-Philosophy of Universology, which One, Many, and All bear to the ProtoPhilosophy or Naturo-Metaphysic ;-the One, Many, and All being as it were a detail of the more General Indefiniteness, embraced under The Clef 1 ; 0 . (t. 115).
219. The terms First, Second, Third correspond, as just stated above, to One, Two, Three as Ordinal Numbers in place of the Cardinal. By this is meant, that they relate to the idea of Things or Events going on and succeeding each other in an Order or Series,-one after the other,-as contrasted with the Idea of a collection of objects, Cardinated, or turning upon a centre, as a Group. (t. 155, 156).
agrees with every number : and in what respect is it that all numbers agree ?" The answer to this question and the illustration are omitted for the sake of brevity. (1).
25. "The Monad and the Duad being the Elements of Number must be viewed as Antecedent to Number. There is thus a primary One which is the ground or root, out of which all arithmetical numbers proceed, and there is also a primary Duad from which numbers derive their diversity. These two enter into the Composition of every number (even into the composition of the numeral One), the one of them giving to all numbers their unity, or agreement, or identity ; the other of them giving to all numbers their diversity. The primitive numbers, the numbers antecedent, as we may say, to all arithmetical numbers are the Pythagorean monad, and the Pythagorean duad. Of these the former ex. presses The Invariable and Cniversal in all number; the latter the Variable and Particular. And, inasmuch as the Par-
ticular is inexhaustible and indefinite, the duad is called aoristos or indeterminate. Better to loold them Elements of Number than Numbers.
26. "As an illustration of the spirit of this philosophy, let me show jou how a solid, or rather the scheme of a solid, may be constructed on Pythagorean principles. Given a mathematical point and motion, the problem is to construct a geometrical solid, or a figure in space of three dimensions, that is, occupying length, breadth, and depth. Let the Point more-move its minimum distance, whatever that may be; this movement generates the Line. Now let the Lino more. When rou are told to let the Line more, your first thought probably is that the Line should be carried on in the same direction-should be produced; but you see at once (the moment it is pointed out to you) that such a morement is not a movement of the Line, but is still merely a morement of the Point. You cannot move the Line, then, by continuing it at one or at both ends.

[^39]220. The Ordinal Numbers relate therefore to Series, or Co-sequences in True; and Cardinal Numbers relate to $G$ Groups, or Aggregations, or Co-existences in Space.
221. This very important discrimination and Analogy will be restated and elaborated at another point (t. 668-9). It is introduced here simply for the purpose of completely clearing the Grand-Head-Numbers One (1), Two (2), Three (3), from all complications with other and analogous designations of Number.
222. So again, Halves or Seconds, Thirds, Fourths, etc., designate Fractional Denominations which echo or correspond to, or are the Analogues of, One, Two, Three (as Integral Denominations).

To move the Line you must move it laterally. That alone is the movement of the Line. The lengthening of the Line is, as I said, merely the morement of the Point. The movement of the Line then generates a Surface. Now, move the Surface. Here, too, you must be on your guard against continuing your lateral motion, for that is merely a continuation of the motion of the Line; and this is not what is required. You are required to move not the Line, but the Surface; you must therefore move the Surface either up or down into the third dimension of space, namely, depth; and these three morements give you the scheme of solid. You have merely to suppose this scheme filled with risible and palpable matter, that is, with something which is an Object for the Particular Faculty in man, to obtain a solid atom ; and out of atoms you can construct the Universe at discretion." (1). Our author had here evidently in mind an inherent connection between Number and Form, such as results from the equivalency of the Numerical Unit and the Geometrical Point, and from the deep

Metaphysical Analogy throughout between the Elements of Number and the Elements of Form. He has failed, however, to make the connection, in terms; leaving it to a rague implication merely; and the present is not the fitting occasion for supplying this deficiency. I have in my manuscripts almost the identical illustration here made of the generation of the solid, which was not consciously derived from any other source than my own reflections,-accompanied by the connecting demonstration which it needed. It will be brought forward elsewhere.
27. Cognate with the Pythagoreans were the Eleatic philosophers. Of the essence of their doctrine Prof. Ferrier says: "The great distinction or Antithesis around which the whole Eleatic philosophy revolves and gravitates, is the Antithesis of the One and the Many, the Permanent and the Changeable, the Universal and the Particular, in Greek, To Hen and Ta Polla. This Antithesis is merely a rariety of expression for the Antithesis between Reason and Sense. Or if we may distinguish between the

[^40]223. These are of a Secondary, not of a Leading character. They have, nevertheless, a Scientific importance of their own which will be exhibited in the sequel.
224. We have now cleared the Numbers One, Two, and Three from their connection with the other Head or Primitive Numbers, which might seem to be their competitors, and have thus fully vindicated their pretensions to stand numerically as representative of the First Principles of Being; and-as it has been shown previously that Number is the General Domain of Being in which the First Principles of Science as the rational account of All Being are to be sought-it appears, as demonstrated, that Unism, Duism, and Trinism, the Spirit of One, Two, and Three, respectively, are representatives of THe
two forms of the opposition, we may say that the one expression, the Permanent and the Changeable, or the Hen and the Polla, denotes the Antithesis in its Objective form ; the other expression, Reason and Sense, denotes the Antithesis in its Subjective form." (1). Ferrier here connotes the identity of the One and the Many of the Eleatics with Reason and Sense (a. 27, t. 204). He might also have identified it with the Monas and Duas (Unisma and Duismi) of Pythagoras (choosing the monarchical or representative Sense of the Monas) (Note, a. 23, t 204; c. 1-5, t. 226.)
28. "Xenophanes," Eleatic, "seems to have dwelt more steadily than any other philosopher, whether Ionic or Pythagorean, on the conception of the One or of Unity as the essence of all things.. His conception of Unity as the Principle of the Universe, and as a Primary Necessity of Thought, seems to have been more determinate than that of any of his predecessors or contemporaries. He held that the One was everywhere ; and Aristotle adds that Xenophanes, looking
forth over the whole heavens, that is, the Universe, declared that The One was God. The first position of Xenophancs, accordingly is that there is Unity in all things, and that this Unity is God. It is in and through God that the Universe is a Universe, that is, has Unity." (2).
29. "In the Pythagorean School the conciliation of the One and the Many was rather taken for granted than discussed and explained. They either ignored or touched lightly on the problem and the difficulties which it involved. The Eleatics, I say, were the first who seriously addressed themselves toits consideration. And it is on this account, in part at least, that their school has been characterized as Dialectical, or Lagical and Metaphysical, while the Ionics were characterized as Physical, and the Pythagoreans 2.3 Arithmetical and Mathematical." (3). Yet the doctrine of Pythagoras logically involves the other, and is therefore the Fundamental Philosophy. Universology evolves and explicates the Metaphysics, or Logic, or Dialcctic, implicitly involved in the Mathematics. Hence it is said to

## Primordial Princtrles of Entity, Thought, and Movemevt in the Universe at Large.

225. Inasmuch as Unism and Duism have now been shown to be the Prine Elements, or the Abstract Principles representative of, the Prime Elements of Being; and inasmuch as they are, in turn, the Spirit of One (1), and the Spirit of Two ( 2 ), respectively, it follows that the Relations of One to Two have their echo in similar Relations between the Prime Elements of Being. Pre-eminent among the Relations of One and Two is their Oppositeness or Polar Antagonism to each other. One is the Opposite, and as it were, the denial of Two; and Two is the Opposite, and as it were, the denial of One. The corresponding relation between Unisma and Dursmr, first in their
rest on the Metaphysics of the Mathematics. In affirming it to be therefore the revival and enlargement of Pythagoreanism, I do not mean as antagonizing or denying the fundamental ideas of any other of the distinctive schools of Philosophy, but, on the contrary, as Measuring, Co-ordinating and Conciliating all of them, with the exactitude of the Mathematical Spirit. As the Mathe. matics are the Measure and Regulator of all Substances, Spaces, and Times, in the External World, so the Subtle Spirit of Mathematics, as a Philosophy, will prove to be the Measurer and Regulator of all possible systems of Ontological and Cosmical Speculation. It holds in the firm grasp of a Single Axaliftical Generalization all the different but related Antitheses, or Sets of Contraries, which have laid at the foundation of all the various philosophical doctrines, and some one of which must ever lay at the foundation of any doctrine.
226. The Trinism of Universology is the Mikton (Mixed) of Pythagoras, but in that enlarged sense that it is the
reconciliation of all Contradictions, Op. posite Elements, or Pairs of Factors, whatsoever ; hence not only of the Antitheses within Systems, but of the Physical and Mathematico-Logical Systems, -to which all others are reducible,-as between themselves also.
227. As Xenophanes modulated especially in the distinction between the One and the Many, one of the aspects of Unism and Deism, so did Parmenides in that between Being and Not-being, another of those Aspects. Heraclitus combined this Antithesis in the Trinism of Existence, in Perpetual Flux or Movement, which philosophers from him have denominated "The Becoming;" (that which is perpetually coming to be, and ceasing to be). "He says that Strife or Opposition is the father of all Things"Polar Antagontsm of Prime Ele-MEnts-" and that Harmony arises only out of the union of discords" (1). "He likens theUniverse to a river the waters of which are continually passing away; and he says that no man can bathe twice in the same stream, because the stream is never,

[^41]lowest and most Elementary and Abstract Presentation, and then in their subsequent presentations, higher up in the scale of Concreteness and Complexity, is then formulized, as a technicality of Universology, in this phrase:

## Tife Polar Antagonism of Prime Elements.

226. But while the One (1) and the Two (2) are thus Opposite to each other, they are, nevertheless, inseparably united with each other. It is impossible even to think One without thinking Two, since the One is One only by virtue of being separated from all other Ones, or at least from all else in the World of Being considered collectively as another One; and Two, it is obvious, cannot be thought without involving the idea of One, since it is two Ones which are untted to constitute
even for a single second, the same. He says that a thing in separating itself from itself unites" at the same instant "itself to itself; that in going asunder it goes together ; and in going together it goes asunder ; in short-that Separation and Union" DUism and Unism "are inseparable, and the same ; that Separation is Union, and Union is Separation" (1)Inexpugnability of Prime Elements (t. 226); Convertible Identity (t. 89); Terminal Conversion into Opposites (t. 83).
227. "And, finally, giving to his doctrine, which is that everything consists of antagonistic and hetcrogencous ele-ments-giving to this doctrine its highest or most abstract expression, he declares that ceverything is and is not;" -Sometiing and Nothing or 1; 1 (t. 115); "a formula which, in modern times has been adopted by Hegel, and has proved the stumbling-block and rock of offence to all who have ventured on his pages." These points contain the whole of the philosophy of Heraclitus, "in so far as they have been handed
down to us, and it is obvious that they merely repeat the same idea with very slight variations." (2).
228. "The distinction between the Universal Faculty and the Particular Faculty in Man is expressed more particularly in his fragments," those of Heraclitus, "than in those of any of the philosophers who preceded him. The Universal Faculty he calls Koinos or Zunos Lojos," (Koinologicism); "the Particu lar he calls Idia Phronêsis," (Idiaphronicism). "The Koinos Logos is evidently the quality or power common to all intelligence, the principle in which they all agree. The Idia Phronésis is evidently the quality or power peculiar to different kinds of intelligence. The one kind, the koinos logos, lays hold of absolute truth, as it is for all; the other principle, the idia phronēsis, lays hold of relative truth, truth as it exists for some, that is, for man considered as a peculiar," or particular, "intelligence." (3).
229. "The substance of his ethical doctrine is this, that man lives and acts rightly in so far as he acts in conformity
(1) Ferrier's Greck Philosophy. Vol. I., p. 113.
(3) Ib., p. 114
(3) Ib., p. $1: \%$.
it Two. This act of separating the One from all other Ones, (or the fact of Separation between them), in the one case, and the act of uniting the two Ones, (or the fact of their Unition), in the other case, is an instance of what is meant by the Spirit of these Numbers, respectively; since Separation is the Spirit of the number Two, and Unition is the Spirit of the Number One. What is meant is, therefore, that the Spirit of One and the Spirit of Two intimately and inseparably interblend with, and co-inhere in, each other, notwithstanding their mutual Polar Antagonism, or utter and equally inherent difference of character. The corresponding relation of Intimate Unity between the corresponding Prime Elements of Being, the marriage between them from which there is no divorce, in the possibilities of thought even, is then formulized as the

## Inexpugnarility of Prime Elements. c. 1-5.

227. In the following Chapter, we shall pass to the consideration of the Entical Universe, or the Domain of Things

Commentary t. 226. 1. The Universality and Scientific Fitness of Unism and Dutsm to include under a Single Generalization all of the Fundamental Distinctions of Being will best appear by applying them to the Antitheses or Sets of Contraries, upon which the different Schools of Philosophy have been founded, as these are exhibited somewhat in detail in the Accom-
with the Koinos Logos, the Universal Reason, in which he participates, but which does not properly belong to him; and that he lives and acts wrongly in so far as he lives and acts in conformity with the Idia Phronesis, or that part of his Nature which is more properly his own. The koinos logos, when its behests are obeyed, leads him away from his own private and personal aims; it lifts him above the sphere of his own selfish interests, and teaches him to think of something far greater than himself: the idia
phronēsis, when it is yielded to, binds him down within the sphere of his own selfishness, and makes him regard his own private advantage as the great and sole end of his existence. Thus viewed ethically, the koinos logos may be called the great moral law ; the idia phronēsis may be called 'man's own conceit.' Heraclitus thus seems to have been the first moralist who identified man's true moral nature with the Universal Faculty in man, and man's wrong and immoral nature with his Particular Faculty." (1).

[^42]Numbered; and shall establish the Scientific Analogy between Number and the Realities to which Number relates. It will therefore treat of the Analogues of Number, but not exhaustively, as new ones of these Analogues will be subsequently called up in treating of the Analogues of Form (in the Fifth and Sixth Chapters), and even farther on, in connection with other subjects. On the other hand, some of the Analogues of Form will, from the intricate connection of the two subjects, be treated in anticipation, in the Fourth or next Chapter, in connection with Number.
panying Annotation upon Text No. 204 (a. 12-33, t. 204). This Comparison is again effected, in a condensed way, in the following Table:

TABIE 1 。

## I. UNISM.

## LOTE ( + Hate, Sub-duismal).

Love (Philia, Attraction).
Tue Full (To Plēres, plenum, Atoms). Cacse (Efficient).
SENSE.
Berng (The Ideo-Real).
Tie Universal.
The Pervanent (or Unchangeable).
The One (To Hen).
Tue Uniluited (Apeiron, Monas, The Infinite).
2. DUISM.

3. TRINISM. (To Mikton, The Mixed, The Limited, The Finite.)-Pythagoras.
2. Each of these Antitheses is, indeed, itself, Unirersal, in a sense, and mar be made to cover the whole ground occupied by the others, by sufficientiy stretching the signification of the Contrasted Terms. Each set of Contrarics
35. The body of the Universological System of Morals may be conveniently and shortly stated in this connection, somewhat technically as follows: The Predominant and Supreme Acceptance of, and the Consecration of the life to, the behests of Koinologicism, or the Truth as revealed in the Universal Reason,
(Consergent or Unismal), and the free Subdominant and Subordinate play of Idiaphronicism, or the Individual Conceits and Idiosyncracies of All, (Divergent or Duismal) ;-these two conjoined, mutually modulated and harmonized in a larger Compound or Complex Unity of the life, Composite, Univariant, Tris-
means, in fine, Unism and Duism in soime Special Aspect or Domain, and embraces, by implication, Unism and Duism everywhere. None of these Couples are, however, convenient for the purposes of this larger conception of Universality. The Love and Wisdom of Swedenborg, for instance, are the Unismal and Duismal Factors, respectively, in the Constitution of the Human Mind, of the Mind of Angels, and of God; and, inasmuch as the full carrying out of Swedenborg's doctrine (see Tulk) reduces matter universally to Mind merely, this would render Love and Wisdom true Universals, and the Universal Equivalents of what I mean by the Mathematical Designations Unism and Duism. But the Technicalities of the Universal Science should not be drawn from an occult doctrine, which requires itself, as jet, to be scientifically established; besides which, it would at least be awkward, even if these premises were admitted, to talk of the Love-Principle or the Wisdom-Principle in Geometry, or Chemistry, for instance. It is the obrious dictate of Scientific Simplicity that our Elementary Technicalities should be drawn from the most Simple, Elementary, and Obvious Domain, which, as has now been abundantly shown, is Number.
3. Few of these Couples of Contraries are furnished, in Existing Languages, with any satisfactory Third Term, to denote their Composity or Mixed State.
ismal. All of these three aspects, first in their Severalty,-including even their inversion in which the normally Subdominant is made dominant-and then reinverted and united, first in Theory and then Practically, constitute and illustrate the Philosophy of Integralism in this one of its applications.
36. "Anaxagoras contributed to Philosophy a doctrine, never heretofore very well defined or understood, under the name of Homoiomeria," sameness of parts (to their wholes). "It is discussed by Lucretius, in the first book of his poem, De Natura Rerum. The statement is thus rendered in Cruche's translation:
'For this it means; that bones of minute bones,
That flesh of flesh, and stones of little stones,
That nerves take other little nerves for food,
That blood is made of little drops of blood;
That gold from parts of the same nature rose,
That earths do earth, fires fire, airs air compose,
And so in all things else alike to those.' "

For the statement of this doctrine as gathered from the writings of Swedenborg, see Emerson's Essay on Swedenborg. Swedenborg himself, in his Animal Kingdom, credits it to the early modern Physiologists of the times immediately preceding his own age. Anaxagoras also introduced into Philosophy the clear conception of Nous or Mind as the Unity or Oneness of Things, contrasting it with the Multifariousness of Matter and Material Phenomena. To him is due also the idea of Final Causes, or of a Determinate Purpose or Quasi-Purpose, in Creation, the basis of the Science of Teleology. There is, in each of these positions, A Terminal Conversion into Opposites from the older views. The Ideal Standing-point is substituted for the Material One, and the Future is substituted for the Past. These changes coincide with each other. They are in the same Spirit, and mark an important advance in the evolution of ideas.
37. The Sophists, in pursuance of this New Thought, made Man the Measure of the Universe; but as they applied this sublime idea in its lowest and immoral sense ; Socrates arose, and it was his mission to recall the World to the considera-

The Mikton of Pythagoras is of this class. Swedenborg has End, Cause and Effect. The deficiency, where it occurs, will be supplied bereafter in the new Language,-Alwato.
4. Unism and Duism must not be confounded with mere Singlism and Pluralism in the vague sense of Unity and Variety (To Hen and Tia Polla). It includes this discrimination, indeed, as one of the Instances of its meaning or application,-the Indeterminate Sense. Determinately, Unism and Dursm are contrasted, not as Singular and Plural, but as One and Two; or as Odd and Even; conducting ouward to the Analogues of all the Definite Relations of the Higher Numbers, and of the different Classes of Numerical Series,-with Mathematical Precision, and in an Infinite Variety of Specific Development.
5. It seems appropriate at this point to add some illustrations and practical applications of Unism, Duism, and Trinism, in their more general sense, as Constituent Elements within Determinate Spheres. This has been in part done already, in regard to Society, by characterizing Unism as Convergent Individuality, or the Centralizing Tendency in Collective Human Affairs, represented pirotally by a MIonarch, Pope, President, Chief, Leader, Boss, or other
tion of the claims of Virtue; or of that which is highest and best in man, as distinguished from his inferior nature. Sensation, according to Socrates, (as expounded by Ferrier), is peculiar or single; that is to say, it is of the Unismal character. Each sensation or impression, as of pleasure or pain, is ITSELF and nothing else or more than itself. "The pain I feel from the prick or scratch of a pin is that peculiar pain only." It is not another case of pain, either similar to or different from the pain which I am actively feeling." "But when you think that pain, you do not think that pain merely, you think other pains as well." That is to say you compare Sensations; you introduce a Thought-line of Relatrow between them. Thought is, there fore, not, like Sensation, peculiar, but is, on the contrary, unicersal, in Kind. The first step from Singleness to Plurality, extending to Infinity or Universality, is taken when we go from One to Tico, or from the Single Point or Thing to more Points or Things than the one, as we always do and must in every caso of Comparison or Relation. Thought or
the whole Intellectual Process is the Perception of Relation and nothing else, (1), the Sensation itself being taken as Entrity. It is always therefore a process of Comparison, and is this elementarily or primarily between Two Points or Things (or Properties or other Rela. tions even). Hence Thought is Duismal, as Sensation is Unismal. As Thought is thus an interposed Lincoof-Relation between Points ; so Sensation is by analogy the Point or Points to which the Line is related, that is to say, it is the Stimulus or Stimuli, the prick or pricks of unrelated Impression upon the Sensitivity. Sensation and Thought are therefore as One (1) to Two (2), in the realm of Number, and as Point to Line, in the realm of Form. Sensation, Point, Unit, and all their Analogues, I denominate Entical; Thought, Line, Duad and their Analogues, I denominate Relational. This is an exceedingly deep and valuablo mine of Analogy to be wrought more in detail at our leisure, but which can only be indicated hore.
38. The Sophists had held, and after them all Sensationalists or Experiential-
(1) Vestiges of Civilization, p. 42 and passim.
head of Organization and Movement; Duism as Divergent Individuality, ending in the Sovereignty of the Individual, the last word of Democracy; and Trinism as the Composity and Balanced Vibration between the former two ; the Universological or Pantarchal Theory of Government. (t. 56; Note, a. 23, t. 204).
6. But perhaps the most simple and appreciable popular illustration of Unism, Duism, and Trinism may be derived from the art of printing. Books have been printed from Blocks of type-forms, in China, for at least two thousand years; and yet we date the Invention of the Art of Printing properly so called a few hundred years back, and attribute it to Faust or Guttenberg. In what does the difference consist? What is the characteristic Element in this new and true and Effective Art, which has given a new impulse to civilization, and almost revolutionized the world? It all consists in the simple idea of cutting the block into little blocks, each one containing but a single type-form or letter, so that when they have been used in one combination or relation, tiey can be separated, changed and recombined at will. It consists, in other words, of Individualizing the Types, or of introducing the Principle of Individuality, and, as it were, of free Autonomy, among them, instead of the Fixed Unity of rela-
ists hold to this day, that Thought is, therefore, a Secondary and Derived, and not an Original and Primitive, far less a Gorerning and Paramount Element of Mind. This is saying that the Line-ofIntervention between two given points is suggested to the mind, or generated as a Line, by the previous existence of the Points. Such is undoubtedly the fact in one aspect of the subject, that is to say, when the attention is first directed to the Points. The Element Line is then accessory to, and dependent upon the Element Point. This is the Natural Order ; but it is equally true that a Line first apprehended in thought, or to which the Attention is originally directed, posits or generates the Points which are its ends, and between which it intervenes; and that in this case of Reverse Order,-the Logical Order,-the Element Point is accessory to, and dependent upon the Line-Element. And, here, that is to say, for all the purposes of Transcendental or Pure Science, as the case is also in Geometry, The Point (with the Line accessory) plays a very subordinate part, and the Line (with the Point accessory) plays the governing and important part. The case is the precise scientific

Analogue of the two kinds of Truth, Particular and Universal, insisted upon in the commencement of this Annotation. (a. 3-16, t. 204). The Porns with its adjunct Line is the Analogue of Particular Truth, as it is of Sensation, (or Quality, or Substance) : the Line with its adjunct Point is the Analogue of Universal Truth, as it is of Thought, (or Quantity, or Form).
39. This exceedingly important Termival Conversion into Opposites, the counterparting of the Natural Order of Conceiving the Evolution of Mentation by the Logical Order of the Conception of the same process, has been partially detected by Prof. Ferrier, and as ably expressed as it could well be without the aid of Scientific Analogy to illustrate it. The following is his account of the matter. It will be seen that he goes to the extreme of denying the Natural Order:
40. "This 'Something more"" than Sensation, which is the essence of Thought, " has been designated by the names of Class, Genus, General Conception or Concept, or Universals....Now these terms, according to the meaning which we attach to them, are either very misleading, or they throw much light on the
tion, or of Indissoluble Connection, which previously existed; and, inasmuch as the Simplest Instance of Such Division,-illustrative of every Other Instance, -is the Division which intervenes between any twoo types, this Individuality. Principle, as a Principle, or as the Simplest Form of such Individuality, is appropriately denominated DuIsm; while the Principle of Fixed Unity from which the Types are rescued by this Duism is, with equal propriety, called Unissr. The solid block retains still, however, its own special class of advantages, as in in the case of wood-cuts and the stereotype-plate. The whole Furniture of the Printing-Office with its Movable Types and its Solid Blocks included, and collectively viewed, then illustrates the Composite Principle, or Trinism, compounded of the Unism and the Doism in the larger Unity of a Complete Equipment. Even the Movable Types come into a Temporary Unity, and are firmly bound up by an iron "chase," when they are destined to be used collectively, and their single use is very limited. They have, however, the immense advantage that they can then be " distributed," and pass freely into an infinite variety of new combinations. This is like the soldiers of a republic where there is no standing army, who assemble and come under military discipline for the emergency, and afterwards disperse to their several occupations in the other rela-

Subject, viz., the Nature of Thought, which we are at present considering. These expressions, as usually understood, are held to express merely one of the modes in which Thought manifests itself, its other mode of manifestation being its apprehension of Particular Things or Singulars. Having apprehended these, in the first instance, Thought is then supposed to fabricate Classes or General Conceptions, or Universals, by means of Abstraction and Generalization, that is by separating the qualities which things have in common from the peculiar or differential qualities which they have, and by giving names to these common qualities, which names (names such as man, animal, and so forth) are significant of the Classes to which the things belong. That Doctrine I regard as exceedingly misteading. It is the doctrine taught in all our Logics and Psychologies. But I regard it, nevertheless, as erroneous in the extreme; erroncous for this reason, that it deceives us as to what Thought is in itself; blinds us as to its true nature.
41. "It seems to me that Thought begins absolutely with Classes, General Conceptions, or Universals, and that it cannot begin otherwise. Thinking is, in its very essence, the apprehension of Something more than" and different from "the Particular; and, therefore, to represent it as dealing in the first instance with The Particular merely, is to represent it as being what it is not its nature to be. To think is precisely not to think of any singular thing exclusively, but to think it as an instance of what may' be again, and again, and again. Every Thought transcends the particular object thought of ; and that transcendence is not one mode in which Thought operates; it is the only mode; it is Thought itself in its very essence....I am convinced that Thought begins by regarding the pain" for instance "as oue of a class; begins by thinking something more than the particular pain itself, and that that something-more is a Class, a Genus, a Conception, a Universal, or, in the language of Plato, pn Idea." (1).
42. This account of the matter is cer-

[^43]tions of life. The Movable Types thus-illustrate Unism, Duism, and Trinism, in their own Evolutions. The solid Blocks, the Movable Types, and the Combination of these two as Furniture, do the same, as just shown, in a larger sense. Finally, if we consider more attentively the Single Block or Type, (unismal from the other points of view), we shall still find (in a more minute sense) the presence of these same three Inexpugnable or Omnipresent Principles. Thus the block or type (or any single object) is, in itself, one only ; and in that aspect it is Untsmal ; but at the same it is sundered or severed by Limits from all the others (or from all other objects); and this aspect of the subject, by which it is made a one object, and which cannot be set aside in considering it, is Dursmal; the reunited aspect of the Object after this analysis of its Constituent ideal Elements is then Trintsmal. If, still more metaphysically, we were to enter upon the consideration of the Composition of the very Substance of the Single Object, we should find nothing else down to Infinity, as we pursued the Analysis and Synthesis, but these three Principles, in new and varying manifestatinns. It was in this sense that Pythagoras saw, somewhat dimly, no doubt, that all things are reducible to the Spirit of these Elements of Number.
tainly correct in The Absolute; that is to say, regarding Sensation and Thought as wholly separable from each other, which in point of fact they never are. What we have therefore to do practically or in the Reclative is to distribute Mentation, a compound process made up of the two abstract Elements, Sensation and Thought, but never completely separable into them. The actually correct distribution is then into 1. Naturismal, Arbitrismal, Experientioid or Feminoid Mentation, proceeding in the Natural Oràer, from Sensation as Principal to Thought as Accessory, represented by the numerical formula $1+2$; and 2 . Scientismal, Logicismal, Reflexionoid or Masculoid Mentation, proceeding in the Logical Order, from Thought to Sensation, represented by the numerical formula $2+1$. It is the latter which is specifically connected with Pure or Transcendental Science, and which is paramount, from the Scientific Point of Viev. It is allied with Abstract or Exact Science, as the other species of Mentation is allied with Natural and Observational Science generally; or with Natural Phi-
losophy. The same ground is traversed in each Order of Investigation, but in the opposite direction, with the same result in a sense, but of a different character, through the intervention of the principle of Mere Preponderatce. The One (1) takes the lead of the Two (2) in one form of the Composition of the Three (3). In the other form the Two (2) predominates orer the One (1).
43. Again, "The Mind is free and active when it thinks; it is compelled and passive when it feels." (1). Hence men are said to be enslared by Sense, by their Senses, by their passions, etc.
44. Sensation finding its Analogue in the Point, and Thought in the Line, let us reason from this Analogy a step farther. In the finest Analysis it may be assumed, in contravention of the prima facie appearance, that it is impossible to think the Point, that is to arrive, in the Mind, at the conception of a Point, prior to having the conception of Lines or a Line; thus that we must first think the Co-ordinates or Converging and indicating Lines which determine the locality of the Point in the imaginary space which

[^44]is to contain it ; that we must at least assume in thought one such Thoughtline along which the Mind passes, as it were, from its own ideal position to that at which the Point is posited. Granting this assumption which is one of the necessary aspects of the subject, and the Conception of Point is then subsequent to, and dependent upon, the Conception of Line; that of Thing subsequent to, and dependent upon, that of Law ; Creation, to the Scheme of Creation in Pure Ideal ; Origins in Time, to Final Causes in the Perfectibility of the Future; Sensation, to Thought ; Sensationalism, to Idealism ; Materialism, to Spiritualism ; Common-place Conceptions, toTranscendental ones, and, in a word, Primitive Natural Couditions, to the Ulterior Scientized Dirine Social Code. Hence, the Whole Historical Evolution of Being in Time (Temporology) is inferior and subordinate to the Logical Evolution of Being in Space (Spaceology) ; this last being peculiarly the domain of Universology, or the Universal Logic, as contrasted with Systems of Practical Philcsophy based on Historical Data.
45. It was then the point of the demonstration implied in the reasoning of Socrates that, while Sensation is the Phusis or Nature of Man, it is only his Lower or Inferior Nature, and that Thought is a Higher or Superior Nature in Man,-and so entitled to govern. It also appears upon further reflection that the Typical or Governing Manifestation or Department of Sensation is Sensuality, which is Vice [the Scriptures abound in this doctrine]; and that the Typical or Governing Manifestation of Thought is the Apprehension of Truth, which, when applied in Action, is what we mean by Right; and the practice of which is Virtue. It is the function, therefore, of Thought, or the Intellect,to Regenerate Sensation; to elerate it from Sensuality to Sentiment, culminating in the love of Truth and Right; or, in theological phrase and form of conception, to "the

Love of God." The Intellectual perception of Right, reinforced by the regenerated Sentiment, which is the Love of the Right, is then Rigiteousness, which is the highest of religious endowments. We find herein the nexus between Intelligence or the enlightenment of the intellect, and Morality or Goodness. Hence the Socratic axiom,-which can only be accepted with the above modi-fications,-That all Virtue is Knoovedge, and that all Vice is Ignorance.
46. Plato developed the Socratic perception of the Priority and Superiority of Thought over Sensation into his peculiar doctrine of Ideas, as the pre-existing Types and Models of all Sensible Objects or Things. The moral affiliation of the idea took, however, a different development. Prof. Ferrier proceeds to show, in further exposition of Socrates, that in the lowest sensuous development of Mind there is no true Self-Consciousness; that in order to the existence of a true SelfConsciousness, the Self must be thought as well as felt, or instead, rather of being felt ; thought apart from all other Selves, and yet into relation with all others, by discrimination and comparison, which the animal, the child, and even those untrained in thinking among men, cannot do ; that this true Self-Consciousness (along with the abstract understanding of Truth and Right) leads, and is the only thing that can lead, to a true Sympathy, beyond the mere animal instinct of herding, and so lays the foundation of true Social Organization; that there is and can be no true sympathy, and no true basis of Society, except as grounded upon Thought, and a dereloped Self-Consciousness or Personality in the Members of it ; the clean-cut discrimination of Self in comparison with other Selves; the understanding of all relationships, affinities and repulsions, duties and rights; and, in a word, of the Laws of a true Societary Organization, or of the Divine Social Code. Ferrier need not be held responsible for all of these conclusions,
but such is the truthful logic of his reasoning on this subject.
47. Consider now that every Actual Line drawn, for instance on paper, or thought of in the Mind, is produced or continued, in the rational nature of things, outward to infinity; that every real Line, therefore, has a Ghostly Line emanating from it, vague, intangible, and unreal, or only half-real, but infinite. These Ghost-Lines, emanating from (or else preceding and causing) all real lines; interblending, crossing each other at all angles ; almost impalpable even to the thought; are the Analogue of Spirit, as the Actual Lines are the Analogue of Thought. Level and Straight Lines are the Analogues of Truth and Right. The Ghost-Lines emanating from such Lines, are then the Analogues of "The Spirit of Truth." But, in a minor sense, all Lines give off their " Spirit"-emanation; still less sensibly every Point serves, by its radiation, also to emane Spirit; but the Radiations are Lines, and so it is only through the Line (or Logos-) Principle that the Point can diffuse itself into Being. The "Spirit" from Lines even in their confusion, having in them always something of Straightness or Truth, (such being the essential Nature of Line), is then regenerative in its influence upon mere Points, tending to bring them into some degree of Harmony or Order. [For Lines keep in mind Thought ; for GhostLines Spirit; and for Points Sense or Sensation ; and finally for the GhostLines which emanate from, and prolong Level and Straight-Lines, which are the Analogues of Basic Sciento-Philosophic Thoughts, or the Primordial Principles of Being, keep in mind "The Spirit of Truth"].
48. It was the Mission of Christ in Judea to announce especially, and to lead in, the Spiritual Dispensation of human affairs, and to carry over thereby
the Socratic idea of Morals, from Knowledge merely, of the True and the Right, to a conformity in the Heart or Sentiment (Sensational), with the True and the Right; to announce and to lead in, in other words, the Spiritual Regeneration of Man. Continue in mind the idea that "Spirit" is the Emanation from Thought, as Ghost-Lines are so from Real Lines; and in view of the preceding explanation let us now interpret some of the words of Christ. While in the act of preaching Regeneration to Nicodemus, he affirms, "The Spirit bloweth where it listeth, and ye hear the sound thereaf, but ye cannot tell whence it cometh, nor whither it goeth, so is every one that is born of the Spirit." (1). We say habitually that such or such a thing is "in the Wind" or "in the Air," when it is an idea which comes vaguely to us merely. Even this "Spirit" which emanates vaguely from the Inherent Wisdom or the Divine Logos, was truly held by Jesus to be capable of a regenerating influence over the Natural or Sensuous man. Such has been and is the Sentimental Regeneration which has occurred in the experience of Christians. But Christ was apparently a mare, and meant also to intimate, on another occasion, that there was in reserve for humanity another and higher hind of RegeneraTION, to be effected through a "Spirit" of a somewhat different character ; namely as we may now say, the Emanations from Level and Straight Lines; the foundations, beams, and corner-posts of the New Jerusalem ; as against the ema-nations from the Congeries of Confused Lines generally-mystical and inspirational teachings. This he distinctly denominated, not "Spirit" merely, but "The Spirit of Truth." He declined to attempt this higher teaching, to minds so little developed as those then in the world, and spoke of it, by personification,
(1) John iv. 8. This was mysticism only to be understood through Inspiration, Intuition and Impression.
as of some One who was to come after him. His memorable words on this subject are, "I have many things to say unto you, but ye can not hear them now. Howbeit, when He, the Spirit of Truth, is come, He will guide you iuto All Truth;" [Scientific AND Moral.] This is no less broad than the clain of Universology itself; "For he shall not speak of himself, but whatsoever he shall hear that shall he speak." This seems obviously to foreshadow the impersonal character of Universal Science, the $A$ bsolute Spirit of Truth, as contrasted with the Personal Claims and Averments of all the previous "Guides" of doctrine, not even excepting his own position as then assumed in the world. It is the foreshadowing, in other words, of the Supersedure (in predominance) of the Arbitrismal by the Logicismal Régime, in human affairs: and "He will show you things to come." Prevision is the distinctive charocteristic of Science; it is prophecy made certain. "He shall glorify me; for he shall receive of mine, and shall show it unto you." The true and perfect Intellectual Dispensation, when decisively and triumphantly inaugurated, will, instead of condemning or depreciating the Sentimental Moral Regeneration inaugurated by Christ, as the Fragmentary and Inperfect Intellectual Development of the past has in a measure done, will glorify Christ by magnifying the importance and essential necessity of his doctrine and life. (c. 30, t. 136). It will also receive of the things which are his, as in the instance now before us, and will expound them, or show them to the world. "All things that the Father hath are mine: therefore said I that he shall take of mine, and shall show it unto you." Christ as the Love-man, the personal representation and embodiment of Divine Love, or Sentiment in its highest form, (the Spiritually regenerated Sentient Nature), possesses, in right, everything which there
is inherently in Being, even in the Masculoid and Senectoid Hypostasis of Divine Being. Wisdom, while it governs, is still the Servant of Love. It can do no other, therefore, than to take and manifest the riches of Love. (c. 1-3, t. 58).
49. It results, nevertheless, that there is something higher in the prospective development of the Human Race, than Proto-Christianism, or the First Form of Christianity, could propound. It results also that all Mystical, Merely Symbolic and Ordinary Spiritualizing Methods of teaching, whether employed by Christ or any other teacher,-Inspirational, Intuitional, Impressional,-were and are merely provisional, prophetic, adumbrative, and preparatory for the Higher Dispensation (Deutero-Christianity). The Ultimate, and Perfect, and Precise Comprehension of the Operation of Spiritual Laws, and of the Mode of Spirit-Life, and of the related subject of Human Destiny, must be derived from a Reflection cast by the achieved discovery and completed understanding of the Laws of the Ex-ternal-Material, and of the IntellectualRational Universe. This must be revealed to the Intellect through Science, carried down by Radical Analysis to Universals, and then, from the foundation so laid, up, by an Infallible Synthesis, to the full proportions of the Scheme of the Universe. It is in this way that the Abolition of Mystery, prophesied of in the Scriptures, is destined to occur. "And upon her forehead was a namo written, Mystery, Babylon the Great, the Mother of Harlots and Abominations of the Earth." "And after these things I saw another angel come down from Heaven, having great power; and the earth was lightened with his glory ; and he cried mightily with a strong voice, Saying, Babylon the Great is fallen, and is become the habitation of devils, and the hold of every foul spirit, and a cage of every unclean and hateful bird." (1).
(1) Revclation xvii. 5, and xviii. $1,2$.
50. Observe here the word, egeneto, has become ; not that it was so while this Mystery was the best that was known in the world, and a proper adaptation to the infancy of the race; but from the time when the Light of the Pure Reason shines in the world; "when the earth is lightened by his glory;" there is no salvation out of the pale of the Regenerate and New Catholic Church; that is to say, in the continued rejection of the Truth as revealed to the Intellect through the medium of Science. As to the old Babel or Babylon of dogma, bigotry, dubious faith, conflicting creeds, and persecuting opinions, it has from that time become "the habitation of devils and a cage of every unclean and hateful bird;" "a mass of rottenness and corruption to be deserted with the utmost speed;" The "Other Voice from Heaven" in respect to her is: "Come out of her, my people, that ye be not partakers of her sins, and that ye receive not of her plagues." (1). The suddenness of the collapse of the old system of doctrines, and of the methods of their inculcation is also strongly put. "Therefore shall her plagues come in one day, death, and mourning, and famine ; and she shall be utterly burned with fire; for strong is the Lord God who judgeth her." (2). So again: "For in one hour so great riches has come to naught." (3).
51. The whole Church, in common with Swedenborg, gives a symbolic interpretation to the Apocalypse; for it will of course admit of no other. (He, indeed, affirms as much of the whole Scripture Narrative). Swedenborg in turn, in common with nearly all Protestant commentators, makes the Babylon of the Apocalyptic Vision to signify the Old Catholic or Roman Catholic Church. I apply the same interpretation, only more radically, to the whole FeminoidaInfantoidal Dispensation of the Past, the

Proto-Societismus (c. 24, t. 136) founded on Tradition, Inspiration, vague guesses and Mystery of all sorts, in the place of the fiowledge of Abstract Truth, and the love of it as a basis from which to proceed to its determinate applications, in the construction and administration of the Individual Life, and of all Social Affairs. By Babel or Babylon is therefore here meant the Primitive Incoherence or Confusion of all Human Affairs, as a State or Condition of Things prior to the Scientific discovery of the Laws of Order and Harmony in the world. By such discovery the Old and Incoherent Order is in fact instantly (in a day or in an hour) blasted, or affected by the cause of its rapid prospective dissolution, however it may for a time linger and retain an apparent and nominal existence. The old Co-Matrix of Social Gestation, like any other Placenta, is destined to be cast aside and to go into decay from the instant of the true Birth of Humanity through the Unification of Intellectual Perceptions; for it is Science which addresses itself to the Universal Faculty in Man, and the achieved Unity of the Sciences will complete the argument as addressed to that faculty. Faith, Inspiration, Subjective Personal Illumination, and all other appeals, address themselves to the Particular Facul$t y$ in Man, and could only achieve, therefore, Sectarian and Fragmentary rosultsas Methods of Knowing-howerer much they may continue to serve, in various ways, for the culture of the Individual Soul. In another sense, however, all the leading Doctrines of all the Religions or Sects of the Past or now extant, will be rescned, reburnished, and reconciled or adjusted in the Scientized character, the Faith founded in Knowledge, of the Universal Church of the Future.
52. It is by no means meant that all Knowledge is instantly opened up to the
$\begin{array}{ll}\text { (1) Revelation, xviii. } 4 . & \text { (2) Ib., } 8 .\end{array}$
logical Exposition of the Apocalypse.
world through the discovery of Universology ; but that the central knowledge is had, from which it becomes possible to proceed outwardly, upon auy radius, in an orderly manner, to the investigation of any given point (t. 183); so that the aequisition of any particular knowledge within the legitimate scope of the intellectual faculty is merely a matter of time, and of the requisite application (t. 183) ; and that, hence, vohosoever chooses, hereafter, to remain in the old Babel or confusion of ideas, will be plagued with the plagues which are denounced upon her. The clear demonstrations of those who see the light will be gall and wormwood to all such, and a just retribution for the hindrances and wrongs which the Mystical teachings of the Past have heretofore thrown in the way of the Reason. Savonarola, Galileo, Bruno, and Servetus will be amply avenged. "Reward her even as she rewarded you; and double unto her double according to her works; in the cup that she hath filled, fill to her double." (1). Only that the tortures inflicted by the Light of Intellectual Truth will rex the Mind and Spirit, and not the bodies of men The New Order will be the final and complete triumph of the Logicismal over the Arbitrismal Régime.
53. The writings of Emanuel Swedenborg are a Semi-intellectual, Semi-mystical, and partial, illumination of the Spirit and meaning of the Older Scriptures and Philosophies. They are, as it were, halfway-ground between the earlier Mysticism and Universology. The writings of Tulk and James are then another halfway-stage between Swedenborg and the Scientific comprehension of Spiritual Laws. All of these speculations will likewise undergo modification and a new exposition from the Light of a Purely Intellectual Revelation. The same will happen for the great mass of
related philosophies which have been evolved from Modern Spiritism.
54. Thought is then pre-eminently The Man, as held by Socrates, and not mere Sensation, as held by the Sophists. The Straight Lines and Levels and Per. pendiculars of the Mythical Cubic city seen in the Apocalyptic Vision descending out of Heaven, symbolize those Fundamental and Regulative Lines and Exact adjustments of Thought, which are at the same time the Laws of Universal Being, and the Principles of the Universal Science-The Axes or Axiomata of Being. As the Laws and Mcasure of the city representing Human Society, so they are the Laws and Measure of Man, and especially of Man as a Spirit or Rational Being superior to sense-in other words, an Angel. Man is therefore, still, only in a higher sense than that of the Sophists, the Measure, while be is also the Measurer, of the Universe. This was testified to by John, the Revelator, in these words: "And he measured the wall thereof, an hundred and forty and four cubits, according to the measure of a man, that is, of the Angel." (1).
55. The kind of Truth which is thus identical with Thought, and with the Measure of the Universe, and with Mind, and with Man as the Measure or M(asurer (c. 1, 2, t. 96) is, of course, as will now be understood, Sclf-Ecidcrt, Necessary and. Universal Truth. In other words, it is Axiomatic, when rightly brought before the attention of any competent mind, or of all such minds. I am not unaware that some philosophers have denied that there is any truth which is absolutely axiomatic. Edgar A. Poe, in a Philosophical Treatise entitled Eureka, has thus denied the existence of Axiomatic Truth in the absolute sense, and J. Stuart Mill, in his recent "Criticism on Sir Win. Hamilton," does

[^45]nearly the same. This extremism finds its parallel in the denial that there is, in the Absolute, any such direction as Up or Down (a. 11, c. 32, t. 136). To discuss it here would lead me too far away from the present purpose; especially as, however, in the Absolute the issue might result, the distinction relutively, and for all practical purposes, between Universal Truth and Particular Truth. so ably elaborated by Professor Ferrier, would remain intact, and no less radically important. The Absolute of Philosophy being, in strictness, a region where all distinctions are wiped out of existence, we must necessarily return to the Relative whenever we would discriminate anything whatsoever; and hence for the terms Absolute and Relative as applied to different classes of Truth after the manner of Prof. Ferrier, the terms Absolutoid and Relatoid might better be substituted.
56. The doctrine of Divine Spiritual Influx and of the consequent regeneration of the human heart, and the other cognate doctrines of Christ, reinforced and modified by the Greek learning and philosophic tendencies of Paul, and by the Platonizing. Transcendental Philosophy of John, and still later of the NeoPlatonists, have formed the burden of Christian Theology and of Christianism, as an influence and drift of development in the world. We need not here pursue further the growth of Philosophy. All the modern systems are radicated in some one of the ancient Greek Philosophies which we hare passed rapidly in review. At another point the divergence from Plato torrards Philosophy, and from Aristotle towards Science, as brought out under subsequent culture, will receive some additional notice ; and other features of the subject will from time to time cccur in the Commentary and Annotation.

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Commentary. Tise Elementismus of the Numerismus, p. 177. Distribution of the MathematicsDavies, Comte, Spencer, (Table 1, Dia. 1), 188-183. Concretismi, 189. Form, Limitation, Substance, Reality, 192. Spencer's Distribution of the Sciences, (Table 1), 197. Pre-Clefs, 201. Systematology, 225. Co-Existences and Co-Sequences-Clancy (Buckle on Mill); Logic, Axalogic, Pantologic, 228-234. Induction and Deduction, (Analysis and Synthesis), 243-246. Fis, Viscus, Viscera, 246. Godism-Unity, Trinity, 249. Coleridge-Grammar, Theology, 271; Additiou and Subtraction the Whole of Mathematics, 274. The Graxd Reconciliation of Ideas, 290. No Apology for accepting Spiritualistic Facts, 291. Swedenborg and Harris, 294. Victor Hugo, Heqnembourg, Kalunkee Incarnation, Prophecy, Millennium, The Grand New Nation, 209-304. The Judgment by the Saints, 20!. "The Grand Crisis;" Hewitt; Reinabilitation of Perbibtent RemainDERS, 308. Decrease of Prayer, Increase of Labor, 310. Death a blunder; Immortality normal; Male and Female Brain, 317. Wronski-Messianism, Pansclavism; Russia, America, 320. Hewitt's Architecture, 321. New Jerusalem, 323. Hair and Beard; Men and Women, 321-331. Musical Octave, 339. Education-Boyle, 346. Wronski's Formula, 349.
Annotation. The Absolute-Ferrier, 195, 200; Mill, 200; Hamilton, Cousin, 207, 208, 213, 215 ; Comte, Lewes, Metaphysics; Counter-Statements, 107. "Senseless Abstractions"-3 Kill, 202, 205, 210, 217. Contradiction The Type of Being, 203, 206. The Muscular Thinkers, 211. The Uncon-ditioned-Hamilton, 214. The Abstract never Actually true, 219. Spencer, 220. Masson-Recent British Philosophy, Extract, 250-257; 261-265. Swedenborg, Dante, "World of Spirits," "Purgatory," 284.
228. In the present Chapter we are to establish the Analogical Relationship between Number, as the General Domain of the Abstract Mathematics, and The Universe at Large, in respect to those Primary Metaphysical Discriminations which are-within this less definite Domain-equally fundamental, but-apparently-less exact than the corresponding Elementary Distributions of Number itself. Such are those conceptions which the philosophers have denominated The Absolute and The Relative:-Reality, Limitation, Existence, and Movement; The Abstract and The Concrete, and numerous others of a similarly ideal and intangible character. Into this latter Order of Discriminations we may now hope, for the first time, to be able to introduce Scientific Exactitude and Precision, by virtue of their discovered definite Analogy with the Primitive Discriminations of Number. Subsequently, the demonstration will be confirmed and completed, through the Analogy, to be shown in the Fifth and Sixth Chapters, between the Discriminations in both of the above-mentioned Domains or Departments of Being-Number and the Elementismus of the Real Universe-with Correspondential Discriminations in an intermediate Department, still more obviously definite
than either of these two ; namely, that of Figure or Geometrical Form. c. 1.
229. We are here, it is obvious, within the Mathematical Domain. Yet it is not the whole of that Domain which we are about to investigate;-except for the purpose of excluding certain grand Sub-Domains, and thereby narrowing the field to that which is most elementary within the total realm of Mathematics.
230. Davies in his Philosophy of the subject divides The Mathematics into three Parts: 1. Arithmetic, 2. Geometry, 3. Analysis, (including Algebra and the Higher Calculus, (1). These are the Pure abstract Sciences of Number, Form and Spacic Relation. It is none of these Sciences as Pure and Abstract Mathematics which are now to occupy our attention ; nor is it the Applied or Impure Mathematics. It is, on the contrary, a Lower or More Elementary Abstract and Fnndamental Department of Numerical, Morphic, and Relational Considerations, one which has hitherto escaped attention, but which is of the last degree of importance, that, namely, of determining the Analogical Values of the Elements of Number and Form, and so of Relation universally.
231. The following Table exhibits the Subdivisions of this

[^46](1) Davies Logic and Utility of the Mathematics, p. 98.
whole Domain. The words in Capital Type indicate the portion of the Domain to which we are about to attend; and those in Smaller Type the portions to be excluded. c. 1-10.

IAB工E13.

| 1. Nusiber. <br> (The Lozeer | 2. (3) Formr. <br> ematics.) | 3. (2) Spacio or Numero-Morphic Relation. c. 1-10. <br> Analysis: (the Higher Mathematics.) |
| :---: | :---: | :---: |
| 3. Applied Arithme tic. | Applied Geometry. | 3. Calculus of Variations. |
| 2. Pure Arithmetical Calculation. | Pure Geometry. | 2. Integral and Differential Calculus. |
| 1. NUMEROLOGY. | MORPHOLOGY. | 1. Algebra. |

232. The treatment of Analysis is not specifically introduced in this work, and it is the same with the subjects placed against the Numbers 2 and 3 in the First and Second Columns of the preceding Table (No. 13), as already stated. above. Number and Form, in so far as they furnish the Domains of the two new Sciences, Numerology and Morphology, are all that

Commentary t. 231. 1. In the Distribution of Mathematics by Daries, adopted in the Text, Mechanics, which (as well as Thermology-the Laws of the Operation of Heat) M. Comte reckons, along with Geometry, as helping to constitute the branch of the Mathematics which he calls Concrete, is omitted. In this omission Mr. Spencer coincides. He assigns Mechanics not to Abstractology, but to Abstract-Concretology, along with Chemistry and Phrsics. (c. 1, t. 269). I suggest that both arrangements are justifed by recognizing Thermology as The Mechanics of the Atomic Constitution of Matter, and this as belonging with Chemistry and Physics (the Affections of Matter-Gore), while Mechanics proper, as dealing with Force embodied in Objects of Sensible Magnitude, beiongs where Comte has placed it, alongside of Geometry, as a branch of the Concretoid Side of Mathematics,-itself a branch of Abstractology. Observe, however, that it is not my purpose, at this stage of the development of Universology, to intervene between Scientists or Philosophers to settle points upon which they are at variance, so much as it is to furnish them with a Method whereby they can intelligently measure the extent of their differences, and arrive ultimately at a satisfactory adjustment. It is the primary object of the New Science to furnish a System of Classification and Nomenclature for all Ideas and Theories, of such unlimited Capacities that each author can express definitely his own conceptions, and that they can be brought into positive and defnite comparison
remain. Of these, Form is remitted to the next two following chapters. It is Number, therefore, as the subject-matter of Numerology, embracing, it may be said, the Philosophy and Natural History of Number, which will constitute the subject of the present Chapter. This will include the consideration of the several numerical Series, and specifically of the Incipient Numbers $1 ; 0$, and $1 ; 2$, which have been adopted, in the previous chapter, as Clefs of the Naturo-Metaphysic, and of Sciento-Philosophy, respectively.
with those of all others. The following table taken from Giliespie's Translation of the Philosophy of Mathematics by Comte, exhibits the more elaborate distribution of the Mathematics as given by the Great French Philosopher :

233. By examining the Typical Table of Existence (Table No. 7, t. 40), it will appear that the Applied Mathematics (No. 3 of Tab. No. 13) correspond with the upper part of the arrangement in the Typical Table culminating in the Laws of Harmonic Movement or Action (Art and Religion); or the Principles of Theory applied to the Life; that the Pure Mathematics (No. 2 of Tab. No. 13) then correspond with the whole general range of the Pure Sciences, or of the Sciences
2. It will be observed that Nexrbers 1 and 3 of Davies' distribution (t. 231) constitute together "The Abstract Mathematics" of Comte, and that NumBER 2, of Davies', answers to "The Concrete Mathematics" of Comte. It appears therefore that Davies has interposed a Concrete Domain (Geometry) between a Lower Abstract Domain (Arithmetic Abstract-Concrete), and a Higher Abstract Domain (Analysis). This is the converse of what, in his distribution of the whole field of the Sciences, Spencer has done, in interposing "The Abstract Sciences" (2) between "The Abstract-Concrete Sciences" (1) below and "The Concrete Sciences" (3) above. (Table 14, t. 247).
3. This illustrates an Antithesis which is important and persistent between the Natural Order of Classification applicable to a Whole-wohich is alvays a Concretord Domain-and the Logical Order of Distribution which is cognate to the Abstract Half of Being, as a Special Domain. This is the

Antithetical Reflection of Concrete and Abstract Distribetion, and is illustrated in the following Diagram :

$$
\text { Diagram No. } \mathfrak{l}
$$

Fig. 1. The Concrete as Measurer of the Distribution of The Abstract.


Fig. 2. The Abbtract as Measurer of the Distribution of The Concreste
(Trigrade.)

properly so called, in the Typical Table, from Somatology up to Sociology; and finally that Numerology and Morphology, as above defined (No. 1 of Tab. No. 13), correspond with, and answer to the bottom of the Typical Table (Tab. No. 7, t. 40) ;-that region of the Table especially which is divided into Naturo-Metaphysic ( $\mathbf{1}: \mathbf{0}$ ), and Sciento-Philosophy ( $\mathbf{1}: \mathbf{2}$ ). These Subdivisions of Philosophy, the old Metaphysical ( $1: 0$ ), and the new Sciento-Philosophic or Universological (1:2), then repeat or echo to the two larger grand divisions of the whole Typical Table; 1;0 to Philosophy at large; and 1:2 to Science at large, or to the Sciences below the range of the Laws of Harmonic Mòvement or Action, which involves, as we have seen, the application of Science to the Life, and which have a Special Relation to the Clef $1^{\text {st }} ; 2^{\text {nd }}$, to be subsequently adopted from the Ordinal Series of Numbers. (t. 269, 282).

[^47]234. The following Diagram is a Distributive Exhibit of this Elementary Domain of Number.

Diagram No. 5.
CRUCIAL SOHEMA OF THT UNIVERSE.

235. The Cardinal Series of Nuarbers, the Direct, Central and Standard Series or Department of Determinate Numbers, appears at the Middle of the Diagram in Perpendicular Position, like the Spindle, Standard, or Centre-Post of a Turn-

No. I., Fig. 1) be everted by Analogy with what has been shown to happen in the larger Distribution, for which procedure there is a Sub-dominance of justification, the Two Extremities, Arithmetic and Analysis, will in turn be thrown below as one, and the Concrete Middle, Geometry and Mechanics, will be carried above as the Head of the Mathematical Domain, which is precisely what Comte has done; and herein is the Philosophy of the difference of his mode of Distribution from that of Davies, which is more simple or primitive, though, we may now say, less elaborate, and in a sense, less correct.
7. It appears, then, if we return to the parallelism between the Normal Distribution of the Mathematics, as evolved from Davies and Comte, and the Spencerian Distribution of the Whole Scientific Domain, Arithmetic may be denominated the Abstract-Concrete Domain of Mathematics, Analysis the Abstract Domain, and Geometry (with or without Mechanics) the Concrete Domain

Stile, oir that around which any apparatus is cardinated or hinged. It arises out of Indeterminate Number as the Ground or Confused Mass of Supporting Materials in which it is rooted, and from which it is derived-made, or created, indeed, -by the Interposition of the Peras or Line, the Limit-Principle. (a. 20, t. 204).
236. The Ordinal Series of Numbers, continued downward and backioard by the Fractional Series,-Ordinaloid at bottom, or in its basis, the Denominators, third(s), fourth(s), etc.,-then crosses the Cardinal or Perpendicular Series at an angle, which is not properly a Right Angle, inasmuch as the Proper Ordinals are Affiliated with the Cardinals (and Primary Attractions are by Affiliation), while the Fractions are similarly allied with Zero (0) and the Indeterminate Numbers. It results, therefore, that the particular Peras, Limit, or FormElement, which enters into, and organizes, the Relations of these Primitive Numerical Series, subdivides in ideal into a Perpendicular Line crossed by an Inclined Line. An Ab-
-wonderfully restoring the harmony of their joint Mathematical Distribution with Spencer's Basic Distribution of all the Sciences. Arithmetic is appropriately Abstract-Concrete, as being, what Comte denominates it, a Calculus of Values, that is to say, of Units directly representative of Atoms, or Objects, or Entities generally, and so collectively of Substance. It is then contrasted with Algebra, etc., which he cbaracterizes, on the contrary, as the Calculus of [Mere] Functions, that is to say, of Relations (Abstract).
8. Geometry is then the Statology of the Concretology, or the Stato-Concretology of Mathematics; and Abstract Mathematics is the Moto-Concretology of the same.
9. The whole of this Commentary requires to be read in connection with Spencer's Distribution of the Sciences, for which see Commentary on Text No.270. It would be too much a matter of detail to trace out, at this point, the harmony of the Spencerian Subdivisions of the Mathematical Domain.
10. It appears also, from what has been said, that there are Two Orders, a Natural and a Logical One, for presenting the Second and Third Degrees of the Trigrade Scale of the Mathematical Distribution. This difference can be indicatecl, when requisite, by the resources of the Figured Nomenclature introduced later in the present Chapter. It is this Duplexity which is referred to by the double figuring in the Headings of Table 13 (t. 231).
stract of this Linear Ideal, so underlying the Relations of Primitive Serial Development, is shown in the following Diagram. The several Figures present the same morphic ideal in different stages of development.

$$
\text { Diagram No. } 6 .
$$

Fig. 1.


Fig. 2.


Fig. 3.

237. In Figure 1 of the above Diagram the Lines are left open, as the pure Abstract Ideal of Lines produced to Infinity. In Figures 2 and 3 the intervening spaces are inclosed by Horizontal Lines of Parallel Analogy between the steps of the different Serial Lines, as between 3 and $3^{\text {rd }}$ of the preceding Diagram (t. 234), (t. 156). In Figure 3 the Morphic Type undergoes a further modification by the reduction in size of that inferior portion of it which indicates Negation, Indeterminateness, and the Fractions, corresponding with, or typical of, the Inferiority of Rank, or the Comparative Obscurity, of this general department of Number, as contrasted with the Integral-Cardinal-andOrdinal Department. These Morphic Types come into View at subsequent points, and will acquire new significance, universologically.
238. The.Standard or Perpendicular Line (Fig. 1, Dia. 6, t. 236), coinciding with Cardinal Numeration, is the Analogue and Type of Statism, and Spaceology; as the Inclined Line (or

Plane) is so of the Abstract Principle of Motism and Temporology, or of Succession or Ongoing in Time. Cardinism and Perpendiculism are Organic or Structural, and Systematic, or Schemative ; Ordinism and Inclinism are Functional, Progressional, Transitional, Evanescent, or "Becoming-WeDG-ism-all "Mechanical Principles reduced to this One." (c. 1-6, t. 9; a. 44, t. 204; t. 219; a. 15-23, c. 32, t. 136; a. 31, t. 204). 239. Finally, there appears in the Table a Horizontal CrossLine constituted of the following signs, $\alpha \infty \propto \infty \infty ;+-= \pm=$. This Line has to be so inserted on the level page, but the true ideal position to assign to it is that of another Inclined Line, like that made by the Fractions and Ordinals, but so related to the dimension of depth, that the $\alpha \infty \alpha x \infty$ should fall back of the surface of the paper and downwards, as allied with the Fractions and $\mathbf{1} \boldsymbol{0}$, and that the $+-= \pm=$ should rise in front of the surface and above, as allied with the Cardinals and Ordinals. The Clef $\alpha \infty$ then denotes The Unconditioned; the Clef $\propto$ The Infinite; and the Clef $\infty$ The Absolute. Metaphysically, as shown by Sir William Hamilton, The Absolute and The Infinite are the two Species of The Unconditioned, which is their including Genus. In the Mathematics the $\operatorname{Sign} \propto$ is employed to denote Infinity. I have adopted the other two of these Signs for the two remaining allied Ideas. The Unconditioned, $\alpha \infty$, in the Domain of Number, consists of the Incomprehensible Ideal Limits-Quasi-Determinate,imposed by the Necessities of Thought, upon all Numerical Seriation whatsoever. The Absolute, $\infty$, is One $=$ All, ( 1 equal to All) ; the Single Unit Undifferentiated into particular Units; The NON-Differentlated Unity. Tife Infinite, $\alpha$, is the Unlimited repetition of Units; Unbounded Numerical Differentiation ; The ALL-Differentiated Unity. As these Limiting ideas are alike incomprehensible, their Union or Conjunction is no other than The Unconditioned. Between the sign for the Absolute and that for the Infinite there occurs in the Table (t. 234) an intermediate sign, $x$.

This denotes The Ineffable or Ecstatic. It is not expected that the appropriateness of these distinctions will be fully apprehended at this point. The subject will recur elsewhere.
240. The remaining, or Anterior-Superior, Portion of this radically Abstract Series of Numerical Considerations, the $+-= \pm=$, then denotes The Conditioned. This, in respect to Number, is the Totality of all Finite and Relative Numeration, both Determinate and Indeterminate. These Signs are, therefore, significant of the broadest and most Fundamental Mathematical Generalizations; which are, namely, Ratio ( +- , or $\pm$, t. 248), and Equation ( $=$, t. 248). It is by the aid of the latter of these that Algebra is constituted, as the Calculus of the Pure Abstract Relations of Number ("Functions"Comte ; as contrasted with Arithmetic, the Calculus of Numerical Entimes or Unities ("Values"-Comte). The sign + denotes Affirmative Quantity. The sign - denotes Negative or Privative Quantity. The sign = denotes Equation, or Static Co-ordination, between the Morevess and the Lessness,-the Uxism, in fine, of the Duism, which consists of The Affirmative One and The Negative One ; or other sums treated as Ones. The $\pm=$ is a sign devised to signify +- and $=$ collectively and is thus the Clef for The Conditioned, to be contrasted with $\alpha \infty$, the Clef for The Unconditioned. The sign of the Conditioned is constituted of the Plus-Minus sign $\pm$, and the sign for Equation = . There will also occur, separately, the Plus-Minus sign, signifying Ratio, and having an Analogy, as shown hereafter, with the Total Concrete. (t. 248, 249).
241. From the Diagram (No. 5, t. 234), let us now, in the next place, dismiss the Ordinal Number Series as having relation, as will be pointed out further on, to Successsivity in Movement rather than to Co-Existeivce in Being, which last is now under consideration.
242. We may in the next place dismiss the Fractions, which, it may be observed, merely, in passing, furnish the Clefs and

Analogues of the Interior Distribution of the Subjectivismus of Being. (t. 307-311).
243. And finally, we may set aside for the moment the Clef $1 ; 0$, which, as the student is now familiarly aware, is representative of Metaphysics, as contrasted with the ScientoPhilosophy of Universology (1;2), which last underlies Echosophy, or the Positive Sciences. This Metaphysical Domain is the Subjectivismus, which is interiorly distributed by the Fractional Clefs. (t. 242).
244. The Clef $1 ; 2(; 3)$ (or $1: 2$ ) is, then, the representative of Sciento-Philosophy as the Elementary Sub-Stratum of the several Sciences ; and hence it is, in a Secondary way, representative of the whole Domain of Science, as apart from, and contrasted with, Philosophy ordinarily so called-that which is herein denominated the Naturo-Metaphysic. (t. 122).
245. Respectively or separately these Numbers 1, 2 and 3, are the Specific Clefs of the Three Primordial Principles of Sciento-Philosophy as defined in the preceding chapter ; namely, 1 is the Clef and Representative of Unism ; 2, of Dursm; and 3, of Trinism. The 3 is the Composity of the 1 and the 2 , and may therefore usually be omitted for the sake of brevity. These Numbers 1, 2 and 3, as the Cardinal Head-Numbers, are then echoed to by $1^{\text {st }}, 2^{\text {nd }}$ and $\mathcal{S}^{\text {rd }}$, the Ordinal Head-Numbers ; and again, by the corresponding Initial Fractional Numbers; and still again by the Indeterminate Leading Numbers One, Many, All. Finally there are the higher metaphysical discriminations represented collectively by the Clef $1 ; 0$; (which is, in strictness, a Duism to be contrasted with a Hypothetical Absolute Unism, which is the Synstasis of 1 and 0 ; together with a Hypothetical Trinism, the Synthesis of this Unism and Duism). These Principles, Unism, Duism, and Trinism, while predominantly ScientoPhilosophic, are therefore, as already shown, Absolutely Universal, as the Elements of all Numbers, and correspondentially as the Elementary Principles of All Being. (t. 224).
246. But, specifically, within the Domain of Echosophy, we are carried up by a new Echo of Analogy, from ScientoPhilosophy, as representing the Sciences, to the Sciences themselves, which then undergo their primary and most radically exact classification, first specifically pointed out by Spencer, into what he denominates 1. The Abstract-Concrete Sciences; 2. The Abstract Sciences; and 3. The Concrete Sciences. The nature and radical importance of this Distribution of the Total Scientific Domain will appear in part by the following Table, and the subject will be resumed at another point. (t. 170; c. 1, t. 270).
247. As the Three Fundamental Sciento-Philosophic Principles are usually mentioned by their appropriate names Unism, Duism, and Trintsm-The Elements of all Domainsthese Cardinal Head-Numbers 1, 2, and 3-as Numbers-may be taken, then, ordinarily as the Clefs or Signatures of these Three Departments of the Spencerian Distribution of Scientific Domains. These we may also denominate, 1. The Naturo-Abstract, (Clef 1) ; 2. The Sciento-Abstract, (Clef 2) ; and 3. The Concrete, (Clef 3) ; as Domains of Science which correspond or echo in turn to the larger distribution of Being into Nature, Science, and Art. See the following Table:

## TABIE 14 .

Clef 3. THE CONCRETE SCIENCES; Body-like-Type, Astronomy. The Concretismus.-Artom. (The Concrete-Concrete; Corporology.)

Clef 2. THE ABSTRACT SCIENCES; (Sciento-Abstract); Form-likeTupe, Geometry. The Abstractismus, or (Sciento-) Abstractismus.Scientoid.

Clef 1. THE ABSTRACT-CONCRETE SCIENCES; (Naturo-Abstract); Substance-like: Massology,-Type, Chemistry. The Abstract Concretismus (or Naturo-Abstractismus).-NATUROD. (t. 270).
248. The First and the Third Degrees of this Scale concur in the possession of a Concrete character, differing, in some
sort, but uniting in respect to the feature of contrast with the True or Sciento-Abstract. The common and less specific difference between the Concrete and the Abstract is therefore indicated as follows:

Clef 1; 3 The Concrete, (Proportional, Ratio-nal). Clef 2; 2 The Abstract, (Equational). c. 1.
249. The Concrete has a repetitory relation to Arithmetic, the Elementary Concrete Department of Mathematics ( $A b$ -stract-Concrete, c. 2, and t. 231), the Typical or characteristic "Rule" of which is Proportion, or the "Rule of Three." The Abstract has a similar relation to Algebra, the Elementary (True) Abstract Branch of Mathematics, the Essence of which is Equation. (t. 240).
250. Recurring to the preceding chapter, we have therein completed a first Voyage of Investigation, or a preliminary Survey of Number as the First, or Elementary and Analytical View of the Face or Phenomenal Presentation of Beingrepresentative of all Difference and Phenomenality whatsoever. Substance, back of all discrimination of it into Thing and Things, or One and Many,-which is the meaning of the term Substance, or rather of the synonymous term Reality, in Transcendental Metaphysics,-is purely and absolutely Unintelligible or Unthinkable; because the very Process of Thought is the insertion of Limits into this Hypothetical Unlimited Substance or Substratum of Being. (a. 37, t. 204). What we can really think or conceive of,-or conceive of ourselves

Commentary t. 248. 1. As the Concretismus subdivides into two Domains, 1. The Abstract-Concretismus (1), including Mere Substance, Mass, Stuff, or Materials, (Non-Pluralizable, Massological); and 2. Tite (Proper) Concretismus (3), including Organized, or Semi-Organized Bodies (Pluralizable, Corporological) ;-so there are, in strictness, two Corresponding Domains of the Abstractismus; the Frnst contrasted with Mass, and the Second with Body. These are represented, respectively, by the Fiirst and Second 2, in the Clef $\mathbf{2} \boldsymbol{;} \mathbf{2}$.
or another as distinctly experiencing through any other faculty than Thought,-is always the Mixed, or Limited, constituted of these two Elements, The Limit and The Unlimited. (a. 20, t. 204).
251. Number is, then, the Simplest, or most Elementary and Primitive Kind or Variety of Limitation. The Mathematical Unit, representing the Individual Thing (Singular, One, Substance-like, Sensationoid), is in turn represented, Geometrically, by the mere Point; and Number as an Aggregation of Units by an Aggregation of Geometrical Points. This is lower down in the Elementismus of Limitation than the Line which pertains to Figure or Form, and hence to Geometry above the Domain of mere Arithmetic. It is here, therefore, in Number, and in the First Elements of Number, that the definite Limitations of Being must first be considered. (a. 8, c. 32 , t. 136 ; c. 8 , t. 143 ; a. $37,38,44$, t. 204).
252. It is nevertheless by the Conjunction, or rather by the recognized Co-inherence of Substance or Reality, incogitable by itself, with Limitation, that the Unit becomes Thing. Hence we have, 1. Substance in the less Transcendental Sense, or an Aggregate of Substances,' involving Limitation in a Subordinate Way as incidental, while nevertheless the Substancive Element is that to which the attention is mainly directed; and 2. Limited Being, involving, subordinately, the Counter-presence of Substance. The Mikton (or Mixture of Substance and Limit) subdivides therefore again, so soon as it is constituted from the two inconceivable Abstract Elements, into, 1. A more Substance-like Mikton, which we mean by Substance in the less rigorous strictness of the meaning of the Term; and, 2. A more Limit-like Mikton, which by similar license we still call Limitation or Form ;-for by a closer analysis it is found that Limitation, and even this Elementary Limitation called Number, is also constituted of a Substancelike Element of Number, which we now call Unism, and a Limit-like Element of Number which we call Duism. Either

Unism or Duism is alike totally inconceivable in a state of entire separation from its Opposite. It is only in the constitution of the Trinism that they are discoverable, by such partial Analysis as can be effected. They are distinguishable, but not separable. Every particular Number, One itself, no less than Two, or Three, or any other, is a Mikton or Compound of Unism and Duism ; in Polar Antagonism, (t. 225), but inexpugnably united (t. 226) with each other.
253. The Constitution of Substance, in that less absolute sense in which alone Substance is Intelligible for the Human Mind, -or Conceivable as being Intelligible for any Mind,and the Constitution of Limitation, of which the instance now before us is Number, is therefore of one identical type ;-the Unition, in a Mikton or Compound, of two Elements, each pair repeating or corresponding to the other pair ; and all of them absolutely incogitable, or pure $N$ Non-sense, except as they are found so united with each other.
254. It now appears therefore in what sense Number and the Distributions of Number become (or may become) the Intelligible Guides, by a corresponding echo throughout, to the understanding of Substance and the Distributions of Substances, as well as of all Forms, or Schemes of Arrangement, in the Universe at large ; and how and why Number is appropriately called the Face or Phenomenal Presentation of Being, and Substance that which lies back of, and presents, the Appearance; why, in other words, Number is the proper Index to the whole Volume of Being; the Inventory and Label of the Contents of the Universe.
255. What is adduced in the present Chapter is therefore a Supplement to, and Counterpart of, what was exhibited in the last preceding Chapter ; it is a presentation of the Substancive Elements of Universal Being (Ontological) in Analogy with the Elements of Number. The Morphic Elements of Being are similarly dealt with in the Fifth and Sixth Chapters.
256. It is only, therefore, in the Chapters following this, in
which the Domain of Form and its Analogues will be expounded, that we shall arrive at the Second and more Governing, though less Primitive, Stage of Sciento-Philosophy,-that which is marked in the Typical Table (t. 40), as Geometrical, both within Sciento-Philosophy having the Clef 1;2 (t. 125). c. 1.
257. The Naturo-Metaphysic, having the Clef 1 ; 0 (t. 125), which we have previously gone over, in a sense; and which is here brought into more definite subjection to the Exactitudes of Thought derived from the Domain of Number, includes, indeed, both Substance (Static Aspect), and Force (Motic Aspect), under the name of Substance; and has in this sense Substance as the Grand Total Subject-Matter of its Investigations. Our previous subdivision, in a sense equally fundamental, of this whole presentation of the Universe, into Something and Nothing, (t. 115), must also be recalled by the reader.
258. Sciento-Philosophy has, on the contrary, for its total Domain, Forns, in that largest of all the various Senses of the word in which it is synonymous with all that is meant by Limitation and all that is derived from Limitation, as Shape or Figure, in the Static Aspect of the subject, and then extending over to, and including all Sequences or the Limitations

Commentary t. 256. 1. Form is more properly the embodied, and hence the tangible or actual Limitation counterparting Substance, as the tangible Reality; while, on the other hand, Limitation is the proper term to counterpart the Metaphysical conception called Reality. Reality and Limitation are therefore properly Technicals of the Clefs $\mathbf{1} ; \mathbf{0}$; and Substance and Form are the corresponding Technicals of the Clef $\mathbf{1} ; \mathbf{2}$ (t. 123). These distinctions in the use of terms are not thoroughly well established, and cannot always be abided by, because, in the absence, heretofore, of any clearly defined difference between the Domains of Philosophy and Science, the two sets of terms have become in a great measure confused with each other. Thus, in the next paragraph of the Text (t. 257) Substance and Cause, are, in accordance with usage, associated and cast in the Metaphysical Domain, while in Strictness, Substance and Force are terms of Science, and Reality and Cause the proper corresponding terms of Philosophy.
upon Motion or Movement, equally with those of Existence. It includes Number by lapping back upon it, as an Abstract of its own Elementary Domain (Geometrical Points ; t 251) ; as Number, in turn, includes the Elements of Form by the Involution of Thought-lines in its Metaphysical Constitution. (c. 8, t. 143).
259. Arto-Philosophy treats of the blending and elaboration, in a Composite Existence-and-Movement, of these two Grand Factors of Existence, Reality and Limitation, or Substance and Form. Its more particular definition, and the exposition of its nature, will occur later in this work. Its Domain is the Elaborismus of Being, as in the Constitution of the Human Body, for example. (t. 480).
260. Returning now to the Naturo-Metaphysic (1; 0), the Something and the Nothing are obviously in a sense Hemispheres of the Total Possible Conception of Being. They are Relative to each other ; and can only exist, in the mind even, as ideas, by virtue of that Relativity. The Something can only be conceived of as the Opposite of the Nothing, and the Nothing as the Opposite of the Something. The fact that they are thus Two, then involves, as its counterparting idea, an ideal Unity back of, and combining, them, in a Spherical Wholeness, of which they, in their Separateness, or Division, or Opposition, are the Hemispheres or Halves.
261. Halfism, or Hemispherism, is the first Equated or Simple and Regular, and hence the first Scientoid or Exact Stage of Partism or Fractionism ; and, as such, it is representative of all Partism in the same manner as Two is representative of all Plurality.
262. We have, in contrast here, therefore, the ideas of Wholeness and Partness, the Partness subdivided into the Something and the Nothing, they being the Halves or First Parts specifically, of All Being, otherwise viewed as a Whole.
263. The discrimination between the Whole and the Parts is therefore, from this point of view, a more Primitive and

Fundamental Discrimination than that which furnishes the Something and the Nothing, or their equivalents, The Positive and The Negative, as Factors of Being.
264. The Wholeness-Conception, contrasted with the Part-ness-Conception, is, it is obvious, Unismal or related to Unity, or One-Thingism, as it is equally obvious that Partism, and especially Halfism, is Duismal, or stands related to the Number Two.
265. But we are compelled now to seek for a still higher Unity of conception : that in which the Wholeness and the Partness shall lose their difference in a blended and backlying Unity, which absorbs all into itself-at least as reconciling and balancing the vibration to the opposite Poles of the Difference.
266. We must seek for this Higher Unity, from the fact which we are now discovering, that the Wholeness and the Partness are, like the Something and the Nothing-although back of that discrimination,-still nothing more than Terms or Opposite Poles of an Antithesis, and hence that in their difference from each other, they are also Relative and Duismal, (i. e., related to the Number Two or to Plurality). We are compelled, therefore, to seek for the contrasted Unism of that Radical Variety which the Wholeness and the Partness, in their Severalty, exhibit.
267. It may at this point be affirmed and intelligently apprehended, that the Something and the Nothing, standing asunder, and yet inseparably related to each other, together with the Relation or Limitation between them, and still further, the Wholeness and the Partness, constitute a prime instance (or Prime Instances) in that sundered relationship, of what the Philosophers denominate The Relative; and that, on the contrary, the Back-lying Wholeness-Aspect, in which these two (or other two, or any two) Elements of Thought and Being, and all the subsequent Discriminations and Relations flowing from them lose their difference, and consequently
their character of Relativity, in an Absolute Ideal Unity, is what the Philosophers have usually meant by Tire Absolute.
a. 1-30.
268. The reader has now become completely familiar with the use of the numerical combinations $1 ; 0$ and $1 ; 2$, as Clefs of the Domains of Philosophy and Science, respectively. We are prepared, therefore, to expand considerably-to the dimensions at least of our Typical Table (t. 40)-this method of Notation, indicated by the use of Elementary Figures applied to Governing Discriminations and Domains of Conception.
269. Omitting, in the first instance, the 1 ; 0-Domain, which is the Inverse or Downward-tending Department of Universal Being, corresponding with the Foundation, Basement, and Cellars of an Edifice, -the Realm of Philosophy, the Elementismus of the Universe, sought by Metaphysical Analyses; let us consider, for the moment, the 1; 2-Domain, which is then the Uprising Fabric of Science, or "The Tenple of the Sciences," as it presents itself ostensibly to the Intel-


#### Abstract

Annotation t. 26\%. 1. This point will be found strongly put by Prof. Ferrier in the following Extract: "In Nature, per se, there is neither Unity, nor Plurality - Nothing is either One or Many; because there cannot be one thing unless by a mental Synthesis of many things or parts; and there cannot be many things or parts unless each of them is one thing; in other words, in Nature, per se," [the Absolute Substratum or Substance of things, ] there is nothing but Absolute Inconceivability." Yet there is in Theory and seeming necessity a Something there which remains to be limited; a Matrix for the reception of the Linear Insertion. "If she," Nature, " can place before us 'thing,' she cannot place before us $a$ or one thing. So said Pythagoras. According to him, it is Intelligence alone which contributes $a$ to


'thing,'-gives Unity, not certainly to Plurality (for to suppose Plurality is to suppose Unity already given), but to that which is neither one nor many ; and this converts the Unintelligible into the In-telligible-the World of Non-sense into the World of Intellect.
2. "This doctrine has been strangely misunderstood. Its expositors have usually thought that things are already numbered by Nature, either as one or many, and that all that Pythagoras taught was that we $r e$-number them when they come before us; as if such a truism as that could ever have fallen from the lips of a great thinker; as if such a common-place was even entitled to the name of an opinion. A theory which professes to explain how things become intelligible must not suppose that they are intelligible before they be-
lectual Vision. This is the Elaborismus of the Universe systematically represented in Thought. (See, in the Typical Table, t. 40, the Parts of the Table which stand opposite the words Philosophy, and Science, respectively.) We also omit, in the first instance, the significance of those Clefs which are derived from the Head-Ordinal-Numbers, $1^{\text {st }} ; 2^{\text {nd }}$, etc. These will be introduced subsequently in the course of this general discussion of the subject. (t. 282.)
270. It is the latter of these Two Grand Departments of Being; Science properly so considered; the Elaborismus of the Entire Constitution of the Universe ;-and this only in its lowest and simplest presentation, like the Lower Story or Ground-Floor of an Edifice-having three Stories or Floors ;which Spencer has so appropriately distributed, (as if, however, it were the whole), into 1. The Abstract-Concrete; 2. The Abstract ; and 3. The Concrete Grand Depart-
come so. If a man undertakes to explain how water becomes ice, he must surely not suppose that it already is ice. He must date from some anterior condition of the water-its fluidity, for instance. Yet the Pythagorean theory of Number, as the ground of all Intelligibility, is usually represented in this absurd light. Number, by which 'thing' becomes intelligible, either as One or Many, is believed to be admitted by this theory to be cleaving to 'thing' even in its unintelligible state. Were this so the thing would not be unintelligible, and there would be no explanation of the conrersion of the Incogitable (the Anoetic) into the Cogitable (the Noetic), the very point which the theory professes to explicate. The theory may be imperfect, but it is one of the profoundest speculations of antiquity. The modern interpretation has emptied it of all significance." (1).
3. This purely unintelligible Substance


#### Abstract

of Being-The Unlimited-is the Reality or Substance, of the Pbilosophers, excluding, and contrasted with, Limitation. When made to exclude every difference, as that even between the Something and the Nothing-Aspect of Being, it is THe Absolute of Naturo-Metaphysic. Now it might seem, and indeed does seem, to all that large portion of mankind who have no appetite for Metaphysics, that this confessedly pure Nonsense as the basis of all Sense or Knowing, might as well be left unattended to. To this numerous body of those always uninterested in the subject, has recently been added the Positivist School of Natural Philosophers, some of whom have been life-time devotees to Metaphysical Philosophy, who now proclaim that Metaphysic has, by pushing investigations back to the Absolute, and by showing its utterIncomprehensibility, convicted itself of futility, and that it is therefore effete,


ments of Science. c. 1. These I have elsewhere denominated 1. The Naturo-Abstract, 2. The Sciento-Abstract, and 3. The Concrete Departments respectively (Str. 0). The First of these is Abstract in the sense that it is separated or divided from the Second as the Second is from it, both being Elementary ; but it is Concrete in its character, and sympathizes with the True Concrete, or Embodied Substantial World, as Chemistry (Mass-Science) coincides with Astronomy (Body-Science);

Commentary t. 2\%O. 1. The following Table exhibits Spencer's fundamental Distribution of the Sciences, subsequently enlarged in detail by him, but not otherwise varied. I have simply taken the freedom to invert the order of it, su as to make it read from below uprard, in accordance with the System of the present work (c. 3, t. 15). (To restore the Natural Order completely, that which is numbered 2, would be brought between the 1 and the 3 ). (1).


It will be perceived that there are reasons for transposing the Biology, Psychology, Sociology, etc., of this Table to the higher general department, against which stands the word Anthropology, in the Typical Table (t. 40). It will also be found, as we proceed, that there are similar reasons for regarding Mechanics proper as a branch of Mathematics.
and hereafter a useless pursuit-especially as its professed object has been to penetrate the Substance of Being. M. Comte pronounced this condemnation of the Metaphysics ex cathedrâ ; and Mr. Lewes, from his ligh position as a worthy historian of Philosophy, reiterated it, and renounced Philosophy as an impossibility for the human mind. Nevertheless Philosophy still lives, and has recently
revired, and the further discussion of this very question of The Absolute is now occupying intensely many of the rery best minds, especially in England.
4. There are three important counterstatements to be made to this off-hand condemnation of Philosophy. 1. Men often find, by prosecuting a search intensely, something else of value, different from that which they were more speci-
(1) The Classification of the Sciences, by Herbert Spencer, p. 6.
both as contrasted with Mathematics (Abstract Form-Science) ; or as One, an Odd Number, coincides with Three, an Odd Number, both as contrasted with the intermediate Even Number, Two.
271. As the Clef 1; 2 is the Indicator of the whole Scientific Domain; and as this numerical formula is an abridgment merely of $1 ; 2 ; 3$, the First Heads of Cardinal Numeration (t. 201), it results that 1,2 , and 3 singly are the proper Clefs of the Three Sub-Departments of this Grand Domain ; but, as these three Figures, standing undistinguished by any other sign, might often be confounded with some one of the numerous other non-technical uses of the same figures, it is better that they be discriminated as Clef 1; Clef 2; Clef 3, respectively; or, otherwise, as (1.), (2.), (3.). This latter method may be regarded as indicating a sort of First Power or Degree of the Value of the Number ; an indication which, in Ordinary Mathematics, is unnecessary ; any figure there, which is not raised to the $2^{\text {nd }}$ or $3^{\text {rd }}$, or $n^{\text {th }}$ Power, being regarded as, of course, pertaining to the first.
fically looking for. This has been the case with the Metaphysicians, who, if they have not intelligently cognized The Unistelligible, have, while seeking to do so, incidentally discovered and established Principles of untold value, which lie at the bottom of the best efforts to master Positive Science, that of M. Comte included. 2. A Negative Result is often no less valuable than a Positive One; and in this case, to discover and clearly demonstrate the Limits upon the Possibility of Knoring, is itself an immense and indispensable contribution to the Positive Knowledge of mankind. How has the Positivist come to know the limits of his own legitimate field of inquiry, except through these very inrestigations? These two statements belong to what may be called the ordinary defence of the Metaphysicians, which might
occur to, though I hare not seen them put by, any one. The remaining one would not be apt to suggest itself, except from a knowledge of Universology. It affects this very question of the Absolute, and its influence over the Actual and the Cognizable Constitution of Being, thus: 3. While the AbsolutoAbsolute of Philosophy, as above defined, is, indeed, utterly unintelligible, ret, upon further reflection, it is no more so than any other mere Aspect or Ideal Element of Being, when as rigorous an abstraction should be insisted on. The mistake consists in treating an aspect as if it were an entity, as if we were intent upon grasping the Whiteness of the Snow apart from the Snow. Or, to state it otherwise, since DUISM is Limit (Tab. 1, c. 1, t. 226), the Enlimited, the Infinite, the Substance, is Unismal, and the effort to
272. Clef 1, or (1.), then denotes, in strict accordance with this Analysis of the subject, what Spencer denominates The Abstract-Concrete Department of Science. Of this the Typical Science is Chemistry, which treats of Substance in the concrete sense, that is to say, of the Stuff or Materials of Being. More largely, this Department of Conceptions is represented by the Bricks and Stones, and Wood and Mortar, of which an Edifice is constructed, whether considered in their Chemical, or in any other of their merely Massive Aspects; that is to say, as the Substances or Materials at the command of the Ruilder, and which are to enter, or have entered, into the Construction. This extends to their Physical Properties (Physics), and to their Laws of (Internal) Force or Action (Endo-Mechanics, Thermotics).
273. Clef 2, or (2.), then denotes what Spencer denominates The Abstract (and what I denominate the Sciento-Abstract) Department of the Total Domains of Science (Exactology), the Typical Sub-Science of which is The Mathematics, and especially Geometry, including, as it were, the Form or Shape

difference between the Absolute Aspect and the Relative Aspect of Being-both alike unthinkable in themselves, or in Pure Abstraction from the other. It is precisely as, when Philosophy pronounces that there is no Matter in the Universe cognizable by us, and that all is Mind, or the Phenomenality of Mind, this Phenomenality undergoes at once a Subdivjsion into a Matteroid and a Mentoid Phenomenality, which immediately replace what we sought for under the former designations. So, under this Universological Analysis and showing, The Absolute re-enters the field of Thought and claims its position in Positive Science, no less than in Metaphysical Specu-lation-only not in the Absdlute Sense.
5. All of the preceding discussion relates to The Absolute as understood by the older Mctaphysics-prior taHegel and
of the Edifice, and so its Exact Architectural Outlay or Plan. This subsumes Logic and Analogic as the Metaphysical Bases on which the Mathematics, (themselves Physicoid) rest.
274. Clef 3, or (3.), then denotes The (proper) Concrete Department of Science ; Cosmology in its Elaborated perfection, the Type of which is the Science of Astronomy. This includes our fully embodied conceptions, all Bodies properly so-called, those bodies which we inspect with reference to their Artistic Combination of Parts and Morements, as especially the Planets Combined and Functionating in the Solar System, like the Limbs and Organs in the Human Body, or the Members of Society as an Organismus. This accords with the Central-andPeripheric Actual Embodiment of an Edifice ; as of a Temple, for example, in which the Altar as the Centre-piece corresponds with the Sun-Centre as Focus (Lat. fire-place) of the Solar System, and the Extensions of the Edifice in various directions, with the Limbs or Quarters of the Sun ; and finally, the outlying or Adjunct Edifices and their Adjuncts, with the Planets and their Satellites. (Certain secondary views of this Depart-

Ferriel, - Who sought to find some segregated Element of Being to which ther could appropriately attach the Absolute character. That was what we may now characterize as the Unismal Doctrine of the Absolute. Ferrier brings forward and demonstrates the proposition that the Onl? Conceicable Absolute is Being in its Actuality, as a Complex of Antithetical Elements. This we may call the Trinismal Aspect of the doctrine. This he has done in the Institutes. But when Ferrier distinguishes two kinds of $A b$ straci Truth, and calls one of them $A b$ soluie, on the ground that it is Unirersal and Necessary, as in his History of Greek Philusophy, lie is then using the term Absolute in an intermediate sense, and delivering the Duismal Doctrine of the Abso-lute-(Hegelian) : an Absolute which attaches to Lar and not to Entity ; Logicis-
mal, not Arbitrismal (Unismal), nor Composite (Trinismal). Ferrier's Trinismal Doctrine of the Absolute will be further discussed at another point. (a.26,t.267).
6. The question of the Absolute passes over from Philosophy into Theology, and seriousl affects that whole Domain as well as Logic itself, or the possibility of sound reasoning. In what sense shall it be held that God is absolute? What is the Criterion of Truth even in an ordinary argument? J. Stuart Mill, in criticizing Sir Wm. Hamilton against Cousin on the subject of the Absolute, has the following:
7. "If we are told, therefore, that there is some One Being $w l .0$ is or which is The Absolute,-not something abso luve, but the Absolute itself,- the proposi. tion can be understood in no other sense than that the surposed Being possesses
ment are, however, fully represented by the panels or interspaces within the Linear Plan of the Edifice, which is otherwise a bare Skeleton or Ideal Framework of Points and Lines representing Abstractology as such.)
275. It is obvious, when pointed out, that, of these three Departments of Conceptional Being, the First (1.) could not be exhibited, with any perfection, diagrammatically, or by a picture or diagram of the House or Edifice in which they are contained ; and that the Third (3.) can be so exhibited only very imperfectly, except by the aid of Color, the use of which belongs rather to Art than to Science. It is equally obvious, on the other hand, that the Second of these Departments (2.) is, on the contrary, especially well adapted to the purposes of Diagrammatic exposition and illustration. All the Strictly Geometrical aspects of an Edifice, the Plans, or Formal Schemata of the building, can be strikingly exhibited in this manner ; and within the Spaces of these Plans there is an echo of the two Departments which cannot be so directly represented. (1.) and (3.).
in absolute completeness all the predicates; is absolutely good and absolutely bad, absolutely wise and absolutely stupid; and so forth. The conception of such [a Being, I will not say of such a God, is worse than a 'fasciculus of negations;' it is a fasciculus of contradictions ; and our author might have spared himself the trouble of proving a thing to be unknowable, which cannot be spoken of but in words implying the impossibility of its existence. To insist on such a truism is not superfluous, for there have been philosophers who saw that this must be the meaning of 'The Absolute,' and yet accepted it as a reality. 'What kind of an Absolute Being is that,' asked Hegel, 'which does not contain in itself all that is actual, even Evil included?' (1).

Undoubtedly; and it is therefore neces sary to admit, either that there is no absolute Being, or that the law, that contradictory propositions cannot both be true, does not apply to the Absolute. Hegel chose the latter side of the alternative ; and by this, among other things, has fairly earned the honor which will probably be awarded to him by posterity, of having logically extinguished Transcendental Metaphysics by a series of reductiones ad absurdissimum.
8. "What I have said of the Absolnte is true, mutatis mutandis, of the Infinite. This also is a phrase of no meaning, except in reference to some particular predicate; it must mean the Infinite in something-as in size, in duration, or in power. Butan abstract Infiuite, a Being
276. Recurring, then, to the idea of a Temple or Edifice of the Sciences, it will be perceived that (1.) and (3.) must be omitted from the direct or immediate representation ; although, by virtue of the Principle of our Science, which is echo or Analogy, they too, together with all of their Subdivisions down to the minutest, may, and do, find a Secondary or Echoing, that is to say, an Analogical Representation (a Re-representation) within the Diagram-elsewhere exhibited-of Science as a House or Intellectual Dwelling-place for Man.

27\%. It is obvious, also, that we have not as yet arrived at anything which is strictly analogous with the Mathematical Powers, as the Square, the Cube, etc. ; not analogous at all, indeed, except through a succession of repetitions, or echoes, of Analogy. That precise Analogy must be sought for within the Exactological Domain, (2.) exclusively, of which the Three Sub-Keys or Clefs are (2.) 1 :, (2.) $2:$, and (2.) 3 :, respectively. These then denote, consequently, 1. Logic (2.) 1 : ; 2. Analogic (2.) 2 : ; and 3. Mathematios (2.) 3 : The Co-
not merely infinite in one or in several attributes, but which is 'The Infinite' itself, must be not only infinite in greatness, but also in littleness; its duration is not only infinitely long, but infinitely short; it is not only infinitely awful, but infinitely contemptible; it is the same mass of contradictions as its companion 'The Absolute.' There is no need to prove that neither of them is knowable, since, if the universal law of Belief is of objective validity, neither of them exists.
9. "It is these unmeaning abstractions, howerer, these muddles of selfcontradiction, which alone our author has proved against Cousin and others, to be unknowable. He has shown, without difficulty, that we cannot know 'The Infinite' or 'The Absolute.' He has not shown that we cannot know a concrete reality as Infinite or as Absolute.
10. "We have seen his principal argument, the one on which he substantially relies. It is, that the Infinite and the Absolute are unknowable because inconceivable; because the only notions we can have of them are purely negative. If he is right in his antecedent, the consequent follows. A conception made up of negations is a conception of Nothing. It is not a conception at all, or is a conception, by the fact of its being a conception of something infinite, reduced to a negation. This is quite true of the senseless abstraction 'The Infinite' ; that, indeed, is purely negative, being formed by excluding from the concrete conceptions classed under it, all their positive elements ;" and so on. (1).
11. Mill here assumes that whatsoever is a "fasciculus of contradictions," is "impossible to exist. ' Now I venture
(1) Examination of Sir Wm. Hamilton's Philosophy, by J Stuart Mill, vol. I., pp 60-62.
lon, (Semicolon, or Comma,) refers to those Echoivg Subdivisions, respectively, of (1.) and (3.), which are of similar Rank. For example, (2.)2 : means Analogic, as the middle department of Exactology or Abstractology (2.). The middle department of Abstract-Concretology will then be represented by (1.) 2:, and the middle department of Concretology, by (3.) 2: If these Echoes are to be excluded, and Analogic solely, as the middle department of (2.) is intended, the 2. is included in parenthesis, and prefixed, as has been done above, and in accordance with the system of Pre-clefs explained in what follows.
278. In other words, all the Subdivisions of Exact Science in the Typical Table, t. 40, fall within the Key (2.) ; and as there is, in accordance with what is above stated (t. 275), an echoing Division less prominent, but real and traceable, (whenever the occasion arises to go there), within the (1.) and the (3.), it follows that it will be convenient and appropriate, when these Clefs (1.) and (3.) are under consideration, to denote their several Sub-domains specifically, as follows, (1.) 1: (1.)2: (1.) $3:-(3)$.1 : (3.)2: (3.) 3 : The Portion of the Notation contained in the Parenthesis is then a
to affirm, along with Hegel, just the contrary, namely, that whatsoever exists, exists under this precise condition, that of being a " fasciculus of contradictions," -that such is, in rine, the characteristic and inevitable Law of all Being and all Existence whatsoever.
12. Absurdissima as this proposition may seem, I cite Mill himself, six pages further on, to illustrate it. He says:
"Again, even if we concede that a thing cannot be known at all unless known as plural, does it follow that it cannot be known as plural, because it is also One? Since when have the One and the Many been incompatible things, in. stead of different aspects of the same thing ;" in Polar Antagonism, we may add, or in other words, in utter contradiction to each other. So, the very type
of Contradiction itself, that from which we derive all our ideas of contradiction, is the difference between the Something and the Nothing ; between the Positive and the Negative ; between the "Eternal Yea" and the "Eternal Nay;" of the Union and Reconciliation of which without the Destriction of their difference nevertheless, All Actual Existence is compounded. And yet the basis of all sound, of all axiomatic reasoning is that: Of two Contradictions both cannot be true (called the Law of Contradiction). What then is the reconciliation between these two Contradictory Statements? Simply this: That any two terms of a Contradiction, in Pure Ideal Abstraction from each other, are mutually incompatible, and that the Admission of the one positively inhibits the Admission of the other; but

Special Key or Pre-clef to the remaining portion; and must be changed when the echoing distribution of other Domains is in question. For example, if the popular Subdivision of the Concrete World into Minerals, Vegetables, and Animals be accepted as sufficiently accurate, scientifically, (3.) 1 : will denote the Mineral Kingdom; (3.)2: the Vegetable Kingdom, etc. The 1 : or 2 : or 3 : without any Parenthetical Prefix, would then denote all the Corresponding Subdivisions of EACH of the three larger Divisions of the whole Scientific Domain-that is to say, they would go round the Circle. They are restrained to a particular one of these Divisions by the Appropriate Pre-clef. The Table below exhibits the Standard Distribution of this view of the Sciences. c. 1.

## TABLE 15.

## FUNDAMENTAL EXPOSITION.

SCIENCE (Form).

279. Diagrams which are to follow, will add new features of Intelligibility and Lucidity to the distribution in question, and be to the World of Science, and to the Science of the Sciences, what the Map of the World or the entire Atlas is to ordinary Geography.
280. The preceding Table is susceptible of being enlarged or carried out in detail to any degree of Minuteness, precisely (in principle) as the Map of the World is expanded and filled in, in parts, to constitute the Maps of particular Continents, Countries, Counties, or Townships, even down to the Garden-plot, or the individual Farm. To preserve, however, the Simplicity appropriate to an Elementary Work, and on account of the less prominence of other parts of the preceding Table, I shall do no more, at this point, than to expand descriptively the Subdivisions of Abstractology or Exactology (The Department of the Abstract Sciences), upon one of its Radii, to what may be denominated its $4^{\text {th }}$ Attenuation, or Power, yielding Algebra as a Type of that degree of
ways assumes the Possibility of a Pure Abstraction of Elements,-and all Actual-ity-which as explicitly denies that possibility. How then shall this Ultimate Contradiction; that between all Pure Ratiocination (the domain of all scientific demonstrations) and all Concrete or Actual Existence; or what is the same thing, between Reason and Sense, find its reconciliation? Why, by an application still in this last stronghold of mystery, of the same Principle, namely thus: That the Sense and the Reason, while they are the two Constituent Elements of Mind, and while they are, in Pure Ideal Abstraction, Absolute Contradictories, and so irreconcilably antagonistic to each other,-are never, in fact, com $^{-}$ pletely abstracted or separated from each other, but are, on the contrary, Inexpugnably conjoined in their Elementary Being, as manifested in any least item of Mentation, whether then called Feel-
ing or Thought; and hence destined to an ulterior Reconciliation in the Universal and Elaborate Constitution of all Things, in every Domain.
13. But let us test this statement of Mr. Mill as mere matter of Abstract Reasoning. Are not the propositions, A is one, and, A is many, as direct contradictories as it is possible to state, provided only that the Oneness and the Manyness be taken in the same sense, conversely? Would Mr. Mill's tailor be satisfied with Mill's logic if Mr. Mill should attempt to prove to him that one pound sterling is at the same time fifty pounds sterling, or many pounds sterling in any degree whatsoever?
14. If, therefore, Oneness and Manyness are not incompatible predicates, it is only because they are taken in different aspects or senses. It is because we mean that $A$ is one in one aspect or sense, ani, at the same time, that $A$ is many in a

Subdivision, adding some general views of other branches and of the totality of the subject.
281. The Second Attenuation, or Power of Abstractology, furnishes, as we have seen, 1. Logic, (2.)1: ; 2. Analogic, (2.) 2 :; and 3. Mathenatics, (2.) 3 :. It is the Mathematical branch which we will now submit to a further division, thus: 1. Arithinetic, (2.) 3 :) 1 ; 2. Geometry, (2.) 3 :) 2 ; and 3. Avalysis, (2.)3:)3; We will now choose Aralysis, (2.)3:)3; as the branch to be further subdivided, as follows: 1. Algebra, (2.) 3 :) 3 ;) 1, 2. Differential and Integral Calculus, (2.) 3 :) 3 ;) 2, (For this splitting of the Second Term of the Trigrade Scale into Two, see Text 000). 3. The Calculus of Variations, (2.) 3 : ) 3 ; ) 3 , (Abridged thus 2) 3) 3) 3.
282. We now recur to the Clef $1^{\text {st }} ; \mathfrak{Z}^{\text {nd }}$. This denotes the Ordinal Series of Numbers and all that is analogous with that Series of Numbers in the Constitution of the Universe. It is an Abridgment of $1^{\text {st }} ; 2^{\text {nd }} ; 3^{\text {rd }}$, as $1 ; 2$ is so of $1 ; 2 ; 3(\mathrm{t} .271)$. The Clefs hare, as we have seen, broader and narrower applications, according to the Punctuation which accompanies
different aspect or sense. Returning then to his criticism of Sir Wm. Hamilton's conception of The Absolute, and allowing the same license of interpreting the contradictions, wherein is the difficulty? Why may we not then affirm, -so far as the consistency of the statement is concerned,-that the same Being is absolutely good and absolutely bad, or absolutely wise and absolutely stupid, etc. ; that is to say, absolutely good in one aspect, or measured by one standard, and absolutely bad in another aspect, or measured by another standard? Since when, I might ask, have such propositions been deemed incompatible? So of the ideas, infinitely great, infinitely small, etc. The co-existence of two predications absolutely contradictory, that is to say, affirming and denying the same attributo in preciscly the same sense, is,
indeed, incompatible : and it is this only which is rightly meant by the Law that contradictory propositions cannot both be true. Short of this absolute Limit, contradictions in terms, contradictions in aspect or appearance, relative contradictions of all sorts fasciculated around an ideal and quasi-inconceirable substance, are the Basic Norm or Type of Existence and Being, universally.
15. By affirming then that all existence is a "fasciculus of contradictions," I mean, of course, contradictions in terms, and contradictions in aspect, precisely as oneness and manyness, may be compatible (Mír. Mill even assenting) : while ret, if they were meant in absolutely identical senses, conversely, nothing could be more contradictory. I mean, in fine, precisely and as the type of all other reconcilable contradictions: that every
them. (t. 277). But the $1 ; 2,1 ; 0,1^{\text {st }} ; 2^{\text {nd }}$, etc., occur most naturally when the scope of the Clef is somewhat indifferent. Specifically they denote the medium range of Scientific discriminations of which the difference between Arithmetic and Geometry is the example; but, in the generalized or indifferent sense now referred to, 1;2 is more apt to be used representatively for the varied range of the Special Sciences than 1.2, which more formally denotes the utmost breadth of scope, and might, on the other hand, be regarded as excluding, in a sense, the minor views (as 1, 2 for example), whereas $1 ; 2$ is Pivotal or Mediatorial between the broadest and the narrowest discriminations, and so alike representational of them all. The Clefs $1 ; 2, \mathbf{1}^{\text {st }} ; \mathbf{2}^{\text {nd }}, \mathbf{1} ; \mathbf{0}$ predominate, therefore, when there is no special reason for deviating from this form of the Clefs. The 1.2 for (1.) (2.) (3.) denotes specifically the Spencerian Distribution of the Sciences which is restricted to their Cosmical or Basic Development. They are to be understood as meaning (1.) $\mathbf{1}^{\text {st }}$ : etc. For Pneumatology and Anthropology the $2^{\text {nd }}:$ and $3^{\text {rd }}:$ must be written ; but it is im-


#### Abstract

thing is, in one aspect, One, and, in another aspect, Many-Unismal and Duismal respectively. 16. What then is Hamilton's, or more generally, the Transcendental conception of the Absolute? It is no other than the Unismal Aspect of Being : as the Relative is the Duismal. The whole " muddie" results, with them, and equally so, with their critics, from confusing, instead of distinguishing and keeping distinct, the Abstract and the Concrete conceptions respectively, both of which are alike important, but belonging to entirely different orters of investigation; from, on the one hand, in other words, treating and endeavoring to conceive mere Aspects as if they were things, and, on the other hand, from discarding the mere Aspects altogether, as "senseless abstrac-


tions," because, as mere aspects, they are not, and cannot be conceived of as things. These are the two standard blunders at this day of Philosophy. There is no in. superable difficulty in reconciling contradictory Aspects of the same thing, so soon as we understand that it is the aspects of the subject merely with which we are engaged.
17. "Sir Wm. Hamilton," Mill continues to say, "surely does not mean by Absolute Unity, an indivisible Unit; the minimum, instead of the maximum, of Being. He must mean, as M. Cousin certainly means, an Absolute Whole; the Whole which comprehends all things. If this be so, does not this whole not only admit of, but necessitate, the supposition of parts? Is not a Unity w? f ich comprehends every thing $e x$ vi termini
(1) Examination of Sir Wm. Mamilton's Philosophy, Vol. I, p. 67.
plied here, this Basic Domain being the Usual or Ordinary one. (t. 284, 285).
283. Strictly speaking, the Clef $1^{\text {st }} ; 2^{\text {nd }}$, as a Domain by itself, that is to say, when neither having, nor implying, any Parenthetical Prefix, denotes Careers of Progression in Time; Progressive or Regressive, as the case may be ;-in other words, Movement as contrasted with Existence (t. 143) ; the Motismus as contrasted with the Statismus (c. 21, t. 503); in a word, Ordinology as contrasted with Cardinology (t. 155).
284. But within the proper Domain of Existence or the Statismus of Being, there is, nevertheless, a peculiar variety of Development which repeats, Within this Domain, the whole of the Motismus as an outlying independent Domain of Aspect or Consideration. This happens in respect to Space, or Organization in Space, when this is elongated, or extended in a single direction,-Time-wise-as especially in the direction of Height; the Tallness, for example, of a House, or of the Individual Human Figure.
known as a pluralitr, and the most plural of all pluralities, plural in an unsurpassable degree? If there is any meaning in the words, must not Absolute Unity be Absolute Plurality likewise? There is no escape from the Alternative: The Abso'ute either means a single atom or monad, or it means Plurality in the extreme degree."
18. But neither Hamilton nor Cousin mean at all either of the ideas here assigned to them; or rather, perhaps, I should say, they would not mean either of them, if they were quite clear as to what ther, as Transcendental Philosophers, should mean. If ther did mean either the minimum or the maximum of Be ing, the single least atom or the whole $w_{i u t}$ h comprehends all things, therwould be .ooing what Mr. Mill, predominantly Echosophical in his order of mind, would be likely to do, and what he has
just complained of the Metaplysicians for not doing ; that is to say, they would be talking of Concrete embodiments of Existence, and not of the Abstract Principles or Aspects of Being as rendered by an ultimate Metaphysical Analysiswhich last is the true domain of the Transcendental Logic. It is, indeed, certain that this class of philosophers have not alwars perceived this, and that ther mix Abstract and Concrete ideas unduly together, or try hopelessly to construe literally the reasonings of the one into the terms of the other, which is like attempting to discover the rigorous exactitudes of Mathematics in the actual products of Nature.
19. What, then, in the proper abstract sense, and within the Transcendental Domain, do they mean, or should they mean, by the Absolute? Not, as I hare said, the single "monad" or "atom," nor
285. There is, in accordance with this statement, a Crossdivision of the Whole Science-World accompanying that which is furnished by Spencer; one in accordance with which the whole Map of the Earth, speaking analogically, is but one Degree in a Trigrade Scale of Distribution. What is now referred to is a Subdivision by Degrees of Altitude, the Earth-Land and Water-mapped out as in Geography, constituting the Lower or Ground Department merely, in this New Distribution ; the Atmosphere above the Earth, strictly the Spirit-World, constituting a Second Elevation or Story, above the Earth; and Man a Third Elevation, theoretically above the Atmosphere (see Typical Tableau of the Universe, Dia. No. 2, t. 41). To change the Type of the Illustration, this Threefold Distribution of the Science-W orld corresponds with the Three Stories of the Elevation of an Edifice of that height (which is the Typical or Normal Height in Architectural Construction) ; or again, with 1. the Pelvis (with the Abdomen, Seat, and Lower Limbs) ; 2. the Thorax; and 3. the Head, in the Organization of the Human Body.
" The Whole ;" but that Aspect, or Property, or Principle of Unity, which is concretely illustrated, indeed, predominantly, by the monad at one extreme of magnitude, and by the grand whole at the other extreme, but which yet also underlies,and exists subdominantly in the midst of, -the total range of Plurality between those extremes of Concrete Being ; and which contradicts, or is opposed to, Plurality as the Counter-Aspect, Property, or Principle. The Relative is then the Counterparting Duism to this Unism; and, finally, Concrete Existence is the resultant from the Complexity of these two, and is their reconciliative higher Unity -the Trinism from the prior Unism and Duism conjointly. This, in turn, subdivides into two Domains characterized by resemblance to the two abstract bases respectively ; hence there is an Absolutoid and a Relatoid Existence, which
repeat and echo, in a degree, but inaccurately, The Absolute and The Relative, which are the pure abstract bases or limits of Thought involved in the conception; but which should not be confounded with these Concrete Reproductions.
20. It is this Concrete Existence in its totality, either in its least or its greatest, which Mill supposes must be meant by the Absolute of Transcendental Philosophy ; but this is a total misapprehension, for Philosophy is only transcendental by virtue of the fact that it goes back of the Substantive Thing to the Adjective Pro!erty, and thence farther still to the Pure Relation (Prepositional).
21. All Adjective Properties, all pure Abstractions, in fine, are necessarily, in a sense, "a bundle of negations," and "a bundle of contradictions" also, if viewed from the stand-point of Substantivity, that is to say, as Things, and not as
286. By inspecting anew the Typical Table of the Universe (t. 40), it will be perceived that the distribution which we have previously effected of the Science-World, following the lead of Spencer, is confined to that part of the Table against which the word Science appears in the margin. That whole Department of the Table now constitutes a First Plateau, or the Ground Floor, in the New Distribution which is at this point under consideration. That portion of the Table against which the word Pneumatology stands in the margin then constitutes the Second Story of the Ideal Edifice. This corresponds with the Atmosphere above the Earth or Ground. While this is in one aspect a Story or Lift in the Ascending Scale, in another aspect it permeates the whole, and expands to the dimensions of the whol? Edifice. The Hells, the IntermediateWorld, and the Heavens, then become themselves equivalents to complete Stories or Stages (Fr. Etages). It was in the perception of this view of Being that Carlyle has said that "The three kingdoms, Inferno, Purgatorio, Paradiso, look out on one another like compartments of a great edifice; a great super-
what they are, mere Aspects, Properties, or Relations. When taken for what they are, however, as pure abstractions, they are not only consistent enough, but the most consistent, in fact, of all our ideas from the pure absence of the disturbing reality ; and, for that reason, they become the regulative forms of all just thinking, and the paramount range of $i d e a$ in the whole Scientic and Sciento-Philosophic Domain. It is the pure Negatismus which is par excellence the Domain of Science. The things with which all Exact Science deals, if we must use the term things, in a modified sense, are therefore Pure Nothings, judged of by any other faculty of the mind than the Pure Reason. What else than a bundle of Negations is a Point, for example, as defined by the Geometer, position without length, breadth, or thickness? It is
the inconceivably least item of Space, itself virtually nothing, posited or treated as if it were something-made a something by the mind for the mind's own uses, while in itself it is a mere nothing, or less than nothing.
22. Mr. Mill would be one of the last to condemn the use, or to depreciate the the value, of such pure abstractions and negations in the Mathematical Domain; yet how seemingly effective, but how really absurd, would be a criticism by some one who had never seized the spirit of the Mathematics, of all the high mathematical conceptions, by showing that Mathematicians pretend to talk learnedly of limits which have no extension, no reality, in fact ; of their minima and their maxima, which are really nothings ; and even of different orders of Infinity, all of them lying wholly out-
natural world-cathedral, piled up there, stern, solemn, awful ; Dante's World of Souls !" The Third and last Story of the Ideal Edifice is then Man, indicated in the Typical Table, by the word Anthropology in the margin.
287. More definitely, the Three Stories of the Edifice, in the ordinary sense of Stories, constituting the Cuboid portion of the Structure, correspond with the Three Divisions of the Pneumatismus or World of Spirit, as indicated by Carlyle in the quotation just made; the Dome of the Temple then repeats the great Dome of the Sky over our heads, The Heavens above the Atmosphere, overarching and enclosing the Atmosphere, and corresponding with the Face and Cheeks of the Individual Man ; and finally, it is the Statue surmounting the Dome, which stands in the Edifice representative of Man himself, as above Nature both Material and Spiritual, representing the Sun, and Standing, like a God, centrally in the Heavens. This, in turn, corresponds with the Head, or more specifically with the Brow, of the Man, in the total Constitution of the Individual Human Body. All the Analogies here
side, not only of the domain of Real Being, but of all conceivable number itself. Mr. Mill knows, however, perhaps better than any one, how absolutely dependent for all its highest triumphs the Science of Mathematics is upon the assumption of these extreme rational attenuations. He has, indeed, in this very work, caustically and most damag. ingly criticised Hamilton's Criticism on the Mathematics, for his failure to appreciate the instrumental value of these same senseless abstractions. And yet, not only Mr. Mill, but the whole of his school of thinkers, the recent Echosophic Generalizers-Comte, Mill, Spencer, Buckle, ctc., are, if I see clearly myself, just as inexpert, when they attempt to appreciate or criticise the immense and invaluable body of German Transcendental Philosophy, as Hamilton is
proven to have been, by Mill, when he entered upon the Mathematical Domain. Their intellectual fingers are all thumbs for the purpose of manipulating the Homoopathic attenuations of this German research. They are, indeed, robust, muscular and powerful, abounding in what might, by a bold metaphor, be denominat ed the brute force of the intellect, while they lack the microscopic eye, and the delicate capacity for handling, which are requisite in the Transcendental Domain. The Mathematics and Formal or Scholastic Logic have been the Abstractismus of Echosophy, and this is the furthest back into the Domain of Abstraction that these thinkers have successfully ven tured; while, of course, thenceforward through the whole range of the Positive Sciences, they find themselves at home, and are upon their own appropriate ter.
sketched must be accepted, however, as the first rude chalkmarks of a picture which is destined gradually to receive shape, and become definite in its parts, as the work proceed. A great variety of subsequent modification must be anticipated and allowed for.
288. We instinctually and correctly indicate the Stories, or the successive Stages of the Elevation of an Edifice in their ascending Series, by the Ordinal Numbers, 1st, 2nd, 3d; not by the corresponding Cardinal Numbers, 1, 2, 3. This is in accordance with what has just been stated of Elongation or Series in Space, as repetitory of a real Duration and SuccessIon in Time. (t. 284). We do the same inversely (or reckoning downwards) in respect to the succeeding Individuals of a Dynasty or Series of Ancestors (or Ascendants) and Descendants; as when we speak of George the First, George the Second, etc. (The French Language furnishes a whimsical exception to this Rule in the expressions Henri Quatre, etc.)
289. But inasmuch as we are still within the grand Domain, denominated Existence, and not in that of Movement; (al-
ritory. In view of these mutual shortcomings, one is tempted to say, without bitterness or harshness-Ne sutor ultra crepidam. (1).
23. It cannot be doubted, however, that Mill has found an abundance of cracks in the armor of Hamilton, even within the Metaphysical Domain. He has had for his subject the incomplete works of a great thinker, who was often too intent upon the idea immediately before his mind securely to guard his defences, and to preserve his consistency with what he might have seen or said upon former occasions; but along with this genuine and valuable criticism, there is, at the same time, the other kind of which I have spoken, resulting from a deficiency, which seems almost to inhere
in the nature of the English mind, of what I may call the aptitude for the Transcendental, or the appreciation of the true spirit of all transcendental thinking ;-which is, to find the pure abstract origins of all the speculative processes of the mind, and of the ideal constitution of matter, and hence, of the total Universe of Being; 一the Pure Nothings which, when discovered, shall be, by reflection, the measure and guide to the right understanding of all the Somethings which exist, in a manner corresponding with that in which the Infinitesimals of Mathematics are accessory to, and transcendently important in, the solution of the relations of actual or appreciable numbers.
24. The defect, for this purpose, of the

[^48]though by the Echo of Analogy, we may seem to be in the latter) ; it becomes proper, on the one hand, to indicate these Grand Stages of Spacic Ascension in the Science-World by the Ordinal Clefs, $1^{\text {st }} ; 2^{\text {nd }} ; 3^{\text {rd }} ;$ and then to prefix to these indications, parenthetically, the Pre-Clef 1.2 to denote the Static Domain; thus (1.2), $1^{\text {st }}, 2^{\text {nd }}, 3^{\text {rd }}$.
290. As the Pre-Clef or Parenthetical Notation prefixed to any Special Notation of a Particular Domain is used to fix the locality, in the larger Distribution, of the Particular Domain in question, (whatsoever it may be), it will assume hereafter a proportional importance, and may demand, even at the risk of some repetition, a more Specific Explanation.
291. The Clef 1; 2, hitherto used in a general and representative sense, undergoes an interior distribution for Specific Uses. When employed to denote exactly The Whole of Science or Echosophy (or the Domain of Being covered by it) as differenced from The Whole of Philosophy, and hence, especially when used as a Pre-Clef denoting this larger Domain under circumstances where it is to be distributed into Minor

> Transcendental thinkers is not, therefore, at all what it is supposed to be by the Echosophic or Muscular School of thinkers and critics, namely, that it goes away from the domain of reality, and into that of contradiction, or opposites; but just the contrary, namely, that they have not been purely Transcendental enough, and have suffered themselves to drop down from this realm of the pure and radical Analysis of Thought and Being, into the concrete applications and embodiments of the Principles which they were engaged in endeavoring to discover. This defect is illustrated when the Absolute (The Absoluto-Absolnte), which should be transcendentally defined as the Unity which excludes all difference, and which is then admirable as an Abstraction, having an infinity of applications in every department of Thought,
(Unism), is thoughtlessly assumed to be a Thing, or a Domain of Things, within the larger Domain of Concrete Existence. It is indeed true, by another Principle of Universology, that every Abstract Principle has a corresponding Concrete Domain characterized by that Principle, or in which that Principle predominatesalthough then never excluding the minor presence of other Principles, not even of that which is most directly opposite to it. But to confound the Abstract ldeal with its Concrete Embodiment is a fault which vitiates the whole habit of thinking. It is in this Abstract Domain of the Transcendental Metaphysics only, that we can grasp that higher Logic of the Universe, which proves also, when discovered, to be closely cognute with the Science of Analogic itself. This is rightly discriminated from formal or scholastic Logic for

Domains, a Period is inserted between the two Figures, thus: 1.2 ; and then, as a Pre-Clef, it is surrounded by a Parenthesis, thus: (1.2). But by deductions covered by special Clefs, as shown in the next paragraph ( $t .292$ ), the (1.2) remains coextensive with the Spencerian Distribution merely. (t. 282).
292. The Grand Echosophic Domain undergoes, then, a Preliminary Subdivision, as follows, into I. + - or $\pm$ as the Clef for Natural Philosophy, treating of the General Conditions of Science and its Applications, as will be more specifically pointed out farther on. ( $t$. 000). II. 1.2 as the Clef for the Special Cardinismus or Statismus of Being (t. 291), which, in respect to Science, is the Abstract Theory of Science, Stationary, in Thought or Idea (or, as it were, in Space); or, typically, the particular Statement of a Problem. (Compare State-ment etymologically with Stat-ion and Stat-ism, from Lat. sto, I sTaND) ; III. $1^{\text {st }} \cdot 2^{\text {nd }}$, as the Clef of the Ordinismus or Motismus of Being, which in respect to Science is the Actual Curriculum of Study (in Tme), or a specific Operation of Science, as the "Doing of a sum ;" or the Solving of a Problem.
many reasons, and even Mr. Mill himself has shown that markedly different aspects of the same subject may sufficiently ground a division of the Sciences.
25. A word further upon Mr. Mill's criticism. "If there is any meaning in the words," he says, " must not Absolute Unity be Absolute Plurality likewise?" Clearly not, in the sense in which I have above defined The Absolute, as an Aspcct of Being. But, just the opposite. For the idea which he intends by Unity, I have needed and adopted the new term Univariety; but Simple Absolute Unity (more strictly Unism), as the opposite or contradictory of Plurality, should not be said to include Plurality. We must hare finer analyses, and discriminate more closely than this. Again he adds : "Is not a Unity which comprehends every thing, ex vi termini known as a

Plurality, and the most plural of all Pluralities, plural in an unsurpassable degree?" The Spirit or Abstract Principle of that which is plural in an unsurpassable degree is what is meant by "The Infinite" as an abstract term, which is at the opposite terminus, as Hamilton has clearly perceived, from "The Absolute" (Transcendental), which is the Spirit of The One, as if it were not capable of Plurality in any degree. In other words, the Undifferentiated Unity of Being as a pure Limit of thought-not as a thing, or being of any kind, but as a Spirit or Principle of things-is the $A b$ solute in this sense of the term ; and the All-Differentiated Unity is the Infinite. These two are therefore very rightly regarded by Hamilton as Species of the same Genus, denominated by him the Unconditioned. I perceive in this no
293. In Clefs of a Secondary Rank or Degree, the Colon, and not the Period, is inserted between the Figures. By this device the Pre-clef may be ordinarily omitted, as 1:2 for (1.2) $1: 2$, or singly $1:$ and 2 : for Subdivisions of (1.) and (2.). So also $( \pm) 1: 2$ and $\left(1^{\text {st }} \cdot 2^{\text {nd }}\right) 1: 2$, in which instances the Pre-clefs being of a Special character, must be retained, the Abridged Clefs not being sufficiently distinctive.
294. The Clef 1.2 (t. 291) then has, in addition to the Cardinal branch 1:2, an Ordinal branch of equal rank, denoted by (1.2) $1^{\text {st }}: 2^{\text {nd }}$. This includes the ascension by Stories, from Cosmology to Anthropology-the three Serial Elevations of the Temple of the Sciences; thus, (1.2) $1^{\text {st }}$, for the basis, Cosmology; (1.2) $2^{\text {nd }}$, for the middle region, Pneumatology; and (1.2) $3^{\text {rd }}$, for the crowning portion of the Edifice, AntiroPOLOGY. (t. 285).
295. In strictness the Spencerian Domain is then 1.2) $1^{\text {st }}$, but this ordinal ( $\left.1^{\text {st }}\right)$ may be safely omitted ; as it is predominantly implied in the absence of the others, $\left(2^{\text {nd }}\right.$ or $\left.3^{\text {rd }}\right)$. (t. 282). This brings us back to a point previously occupied, where the ordi-
such jamble of ideas as Mill seems to discover, but on the contrary, a magnificent generalization in the highest range of Metaphysical Speculation.
26. Yet there is such a conception possible of the Absolute as that which Mill here indicates-one inherently and inexpugnably compound or complex; a Composite or Trinismal, Conception ; hence an Absolute identical with Actual Existence itself. This is the Absolute predominantly of Universology and the Integral Philosophy, but not the Absolute of the Transcendental Metaphysic in any of its forms, if we except that of Ferrier, expounded in his Institutes of Metaphysic. The Ordinary Transcendental Absolute being Unismal, the Relative is the Antithetical and Correlated Dursmos, and this New Absolute of Fer rier and Universology is Tife Trinis-
mus which is the Composity of these two, -the Only Real Being, embracing the other two Conceptions as Aspects of Being merely. They are, however, essential and necessary Aspects within the whole Domain of Philosophy, neither excluding the other, both included and reconciled in Real Being-and not "Senseless," except when put for more than what it is their nature to be.
27. Every system of Philosophy is characterized most especially by its view of the Absolute, which is its point of departure, and as it were, its foundation. The Philosophy of Integralism accepts the Totality of All Being and Existence within the Totality and Complexity of all Movement or Change, as its (predominant) conception of The Absolute ; but it does not confound this view with that which lies at the basis of other Systems
nary significance of the three Cardinal Head-Numbers was pointed out as denoting Spencer's threefold division of the Sciences. It was there also stated that in this use of these Numbers the word Clef was prefixed, or else that the Figures are enclosed in Parenthesis. (t. 271). The 1. and 2., when they stand together, and are not a Pre-clef, drop the Parenthesis, however, and take only the Single Period between them. This Notation then indicates specifically the Spencerian Distribution, (1.2.3. in full); but it is then used in a Generalized or Indifferent sense for any Story of the Edifice; predominantly meaning the First. The $1^{s t} 2^{n d} 3^{r d}$, added, make it definite.
296. A similar Series of Modified Notation is also applied to the Subdivisions of Philosophy, which will be explained in the sequel, and with which the student will become gradually familiar.
297. When 1.2 and $1^{\text {st }} .2^{\text {nd }}$ are to be combined as one, the Clef $1.1^{\text {st }}$ expresses the combination. The Clef $1^{\text {st }} .1$ is substituted if Practical Study, the Actual Curriculum, is regarded
of Philosophy. Integralism thus rests upon The Inexpugiability of Prime Elements. (t. 226). Mr. Mill seems vaguely to apprehend this new and practical conception of the Absolute, and to suppose that a view in which he is, in a sense, in advance of the Transcendental Philosophers (except Ferrier), is that which they must have had. In another sense he is less than the Transcendentalists, inasmuch as he has not gone back upon and thoroughly comprehended the spirit and intrinsic value of the radical analytical discriminations which they have sought to make; which are so essential ; and which I have found it necessary to carry back of them even, in order to find a thoroughly safe ground for the subsequent Synthesis. It is the preeminent fault of Comte, as it is of all this robust modern French and English
school of thinkers, that he attempts a synthesis of ideas and of the Social Life, before having reached any completely radical Analysis as back-ground and foundation.
28. The incognizability and incomprehensibility of the Absolute, as alleged by Hamilton, amounts then simply to this. All attributes or predicates whatsoever are "Negative Predicates," in the sense that by virtue of their abstractness they are Nothings, and hence inconceivable as real things. They are pure Nothings when we attempt to conceive them as unattached to any Substantive Thing. They are the realms of Adjectivity and pure Relativity as contrasted with Substantivity, which last is the only realm of Reality thence it follows, on the one hand, and in one sense, that they are incognizable and incomprehensible; the
as the main point of view. The $1.1^{\text {st }}$ expresses the combination if the former point of view is preserved, which subordinates The Practical to The Theoretical.
298. The Natural is converted into the Logical Order by reversing the order of the Figures in any Clef; thus, (2.1) $1^{\mathrm{st}}$ denotes Anthropology as First; (2.1) $2^{\text {nd }}$ Pnedmatology as Second; and (2.1) $3^{\text {rd }}$ Cosmology, as Third, in a Descending Order, as in passing from the top of an Edifice to its Foundation. The Applications of this Reversal or Terminal Conversion into Opposites are numerous and important. They will be gradually introduced and rendered familiar.
299. When a second or third Pre-clef occurs, the single Parenthesis-mark (or clamp) is added to include it ; thus, (1.2) $\left.2^{\text {nd }}\right) 1^{\text {st }}$, denotes the Unismus of the Spirit-W orld, known as Hell, or The Hells. The method of reading this Notation is thus: One, period, two, clamps ; second, clamp ; first.
300. The Subdivisions of the Spirit-World-the Pneuma-tismus-and their Denotation will then be as follows: 1. For The Hells, (1.2) $2^{\text {nd }}$ ) $1^{\text {st }}$ 2. For Purgatory, or The

Absolute and the Infinite along with all the rest of them. But, on the other hand, it does not follow, as we have seen, that as accessory ideas and discriminations, they are useless, or not even of the utmost and governing importance in the domain of ideas, no more than it follows that Limits, in the Mathematical sense, are useless and senseless contrivances, because in themselves they are mere Nothings.
29. When we descend, (or ascend, as we may view the case) from this region of pure Abstraction to the Concrete, as in passing from the Infinite to the Something Infinite of Mill, we may doubtless accomplish something else very important, but something very different in kind. An illustration occurs within the limited sphere of the Mathematics themselves. Seba Smith, an American writer
of genius, but little known in the scientific world, undertook in good faith, and with great astuteness, a criticism of the Geometry we have derived from Euclid, applying similar concrete conceptions. He asserted, what Comte also asserts, that no line is really without thickness; but he went further, and asserted that it should have, geometrically considered, this element of thickness recognized and treated as equal to the unit of measurement. He failed signally to upset the Abstract Geometry based on "the old senseless Abstractions," which has come down to us from the Greeks; but this novel kind of investigation really did lead to a new species of Geometry, if I may use the expression, which may, at some futare day, receive a great and valuable development. This, in turn, failed to be appreciated by the Scientific World, too thor-

World of Spirits, (1.2) $\left.2^{\text {nd }}\right) 2^{\text {nd }} ; 3$. For The Heavens, (1.2) $\left.2^{\text {pd }}\right) 3^{\text {rd }}$. (The Colons, etc., implied by position).
301. The following will denote the Subdivisions of the Hearens as rendered by Swedenborg: 1. For The Natural Heavens, (1.2) $\left.2^{\text {nd }} ; 3^{\text {rd }}\right) 1^{\text {st }} ; 2$. For The Spiritual Heavens, (1.2) $\left.\left.2^{\text {nd }}\right) 3^{\text {rd }}\right) 2^{\text {nd }} ;$ 3. For The Celestial Heavens (1.2) $\left.\left.2^{\text {rd }}\right) 3^{\text {rd }}\right) 3^{\text {rd }}$.
302. In the Department of the Typical Table ( $\mathbf{t} .40$ ) against which in the margin is the word Anthropology, the first Grand Subdivision of the Static Aspect of this Domain is notated as follows: 1. Biology, (1.2) $3^{\text {rd }}$ ) 1 ; 2. MonanTHROPOLOGY, (1.2) $3^{\text {rd }}$ ) 2; 3. Sociology, (1.2) $3^{\text {rd }}$ ) 3. Brology subdivides into Physiology, (1.2) $3^{\text {rd }}$ ) 1 ) 1 ; and Psychology, (1.2) 3 ${ }^{\text {rd }}$ ) 1) 2, etc. Soctology subdivides into 1. Proto-Societismus, (The Old Soclal Order, or, simply, THE OLD ORDER), (1.2) $3^{\text {rd }}$ 3) $1^{\text {st }} ; 2$ 2. Deuto- or DeuteroSocietismus, (THE NEW ORDER-Transitional), (1.2) $3^{\text {rd }}$ ) 3) $2^{\text {nd }}$; and, 3. Trito-Societismus, (The Ulterior, or FinAL ORDER), (1.2) $3^{\text {rd }}$ ) 3) $3^{\text {rd }}$;-The Old Order, (till now), under the governance, in Preponderance, of Feeling (Affection, whether Amiable or Inverted) ; The New Order, (from now
oughly imbued with their abstract conceptions to find anything of value in their concrete counterpart, and Mr. Smith's book is now, therefore, probably out of print. Mr. Smith calls the straight line without thickness, a senseless abstraction in the same way, and with the same justice that Mr. Mill so characterizes the Absolute and the Infinite. Each thinker is quite right in one view of his subject, while wrong in negating or ignoring the opposite view.
30. We have the utmost need, in Science as well as in Philosophy, for the abstract term The Infinite, to mean precisely what Mill seems to consider so absurd; that is to say, to include under the same head the Infinitely Great, and
the Infinitely Small, and all other special Infinities, no matter how much, in all other respects than in this one of Infinity, they may differ from, or contradict, each other. As a term of Science and Philosophy it is by no means entitled to be derided as a senseless abstraction. Yet it is very true that this Abstract Infinite must, when put for an Infinite Being, undergo all the modifications of idea which are always implied in passing from the Abstract to a corresponding Concrete Domain ; and it is in pointing out in part the incompatibility in employing the same term in the two senses, that Mr. Mill is here doing valiant service in behalf of the truth. The subject is one that needs to be vastly more ex-
and in the Immediate and Transitional Present), under the governance, in Preponderance, of Reason, The Intellect, or Intelligence ; The Final Order, (Normal, Harmonic, Active, and Dynamic), under the governance of The Reason and The Feeling in Balanced Vibration and Ecstatic Harmony with each other ;-the Reason, the Masculoid Element, still, however, surmounting the Affectional Element, impressing and impregnating it with the Spirit of Law, Obedience, and Orderly Progression.
303. This Harmonic Order of Society inherently involves, and rests upon the complete vindication of both IndividualITY and UNITY ; each separately, and then themselves combined in a New Composite Unity with each other. (See Typical Table t. 40 at top, and under the two Heads, 2. Positivist Distribution, and 1. Universological Distribution; also t. 40-60; Note, a. 23, t. 204; c. 1-5, t. 226; t. 311, et passim.
304. In the Analysis of the Principles of Action, carried up to, and occurring as the Normal Harmonic Movement of, Society, there intervenes a Terminal Conversion into Oppo-
> tensively ventilated, and in the light of the most exact discriminations of the nature of the two domains.
> 31. As an Abstract Mathematical proposition it is true that two are equal to two ( $2=2$ ), and this kind of knowledge is not only not of no value, but from the scientific point of view, it is of superior value to any concrete truth whatsoever, and is governing over the concrete truths of Science universally ; but translated into the terms of the Concrete, it is never true that any two apples, or two oranges, are equal to any two other apples or oranges. So again, that all men are created free and equal, is a fundamentally important truth of the abstract side of the Science of Politics, and not only not unimportant, but of paramount and governing importance as furnishing a basis
and point of departure for all righteous reasoning in respect to the rights and conditions of all men in Society. But translated into the terms of the Concrete it is never true. No one man is ever free, and no two men are ever equal absolutely; and there is a lower practical order of mind which can only appreciate this factual side of the truth, and can never rise to the divine beauties of the higher abstract side of it. All actual or composite or High Practical Truth is made up of these opposite factors, contradictory in terms. It is hence, as it were, necessary to tell two falsehoods (for every half-truth is false) before the High Practical Truths can be stated as the Comparison is adjudicated between them.
32. It is the distinction between the

SITES ; a normal change, for this region, from the Natural to the Logical Order; and the Divergent Individuaility, -Duismai-here becomes Basis, and the Unity of Society,-Unismal-(represented by Social Pivots, Monarchs, Leaders, etc.,-Note, a. 23, t. 204) arises, as a Consequence and Superstructure, out of it. The Complex Unity of the Unity with the Individuality, then arises still, as the Trinism, above them both, and is the Harmony or Balanced Vibration between them. The Notation for these Three Principles thus occurring in the Analysis of the Action or Movement of a truly Constituted Society is as follows: I. Diveraent Individuality (or merely "Individuality"), (1.2) $3^{\text {rd }}$ ) 3) $3^{\text {rd }}$ ) 2 .; II. Convergent Individdality, (or "Mutuality," or Collectivity, or "Sociability"), (1.2) $\left.3^{\text {rd }}\right) 3$ ) $\left.3^{\text {rd }}\right) 1$.; III. Univariant Individuality, the Balanced Vibration between Divergent Individuality, or the Freedom-Principle, and Convergent Individuality, or the Principle of Order, (1.2) $3^{\text {rd }}$ ) 3 ) $\left.3^{\text {rd }}\right) 3$.
305. Carried farther than this the Technismus and Notation of Universological Discriminations in these Superior Spheres


#### Abstract

in this rigorous sense and the Concrete whick has been so admirably seized upon, and adopted by Spencer as the basis of the first division of the Sciences. It is, contrary again to the opinion of Mr Mill (1), a far more radically important and truly philosophical ground of distribution than any of the practical grounds adopted by Comte. The entire separateness, the immense distance between these two departments of knowledge, which are confusedly treated both by the Metaphysicians and their critics, the utter impossibility of rendering the one into the terms of the other directly, or otherwise than by an all-pervading analogy or echo of resemblance in the midst of dominant differences, and the yet equal importance, notwithstanding their difference and distance, of both these domains, are subjects which cannot be too much insisted upon, and the importance of which can hardly be exaggerated. Transcendental Metaphysics are the pure Abstractness of Cosmical Laws. Of course, when translated into the terms of Echosophic Reality, they are Pure Nonsense. They are, nevertheless, true in their own way, and will ever remain of the same ruling importance over all just thinking in this higher Domain of Rationality and Law ; whence they will descend, not as Real Things, bue as regulative forms of thought, throughout the whole possible accumulation of our knowledges in the Concrete World.


(1) Articles on Comte, in The Westminster Review, April and July, 1865.
becomes too Complex and Special for an Elementary Work. I must here advert, before dismissing Echosophy, to the Domains of Aspect and Consideration which are analogous with the Numerical Fractions, and with the Metaphysical Clef, $\mathbf{1 ; 0}$, together with their Indeterminate Accompaniment, One, Many, All. To carry out this Classification of Human Knowledge in detail will require special volumes and works as technical as the Nomenclature of Chemistry ; and, perhaps, more of accuracy, in some respects, even in these beginnings, than it is quite possible to introduce at this early stage of the development of the Science. The discriminations now in question are especially difficult, and will require the most cautious and extended investigations before the New Science of the Subject shall be allowed to crystallize into its ultimate form. Besides this, they belong primarily to Philosophy, and will recur presently under that head. (t. 340). Here, in Echosophy, they are Subdominant merely, an Echo from the more Subjective Plilosophical Domain. Some of the following Statements are so general as to apply indifferently to the Philosophic or the Echosophic Aspect of the subject.
306. Among the Fractions, as seen in Tab. 14, t. 234, the reader will, in the first instance, notice the unusual combination of figures $1 / 1$, as if Unity could be divided by itself. This is a Metaphysical, though not a Mathematical, idea. The Mathematical Fractions commence with the Halves of Unity, indicated by $\%$, leaving unaccounted for the first place in the Scries, which is here supplied in the Table. This Clef $1 / 1$ denotes Wholeness as the Opposite Aspect of Being to Partness, the first stage of which in regular order is Halfness ; hence also Elementary Oddness as contrasted with Evenness ; and, finally, Arbitrismas contrasted with Logicism or Equity. Integrism or Wholeness-Aspect is the Unity of Being, apart from any Actuality of Division into Parts ; excluding the idea of such division, indeed, to the utmost ; but of necessity covering the Susceptibility to such Division, which Susceptibility
is suggested by throwing the Unit into the form of a Fraction, or clothing it, in other words, with the Fractional dress. It is, therefore, for this Abstruse Metaphysical idea-the WholenessAspect of Being-that the Notation in question is employed; still, however, not in the Absolute Degree s (t. 466).
307. The subsequent regular Sections of the Unit into Ali quot Parts of the Wholeness, which are then called Fractions, (properly Sections), - $2 / 2$, for example-denote Internal or Subjective Division and Distribution, or, in other words, and more largely, The Laws of Subjective Order and Harmony, in the Universe at large, or in any given Department of it; as the corresponding Whole Numbers or Integers1, 2, for example-denote External or Objective Distribution, or the Objective Laws of Order and Harmony. This important Sciento-Philosophical Difference may be illustrated in connection with the House or Edifice, as a Type of Being universally, thus: The Equal Division of the House on the Right and Left Sides from the Main Entrance and Centering Hall or Passage-Way, the Bi-lateral Symmetry of the Building internally, relating to the ranges of rooms or apartments, and All that is Analogous with such Distribution, in the Universe at large, is signified by the Clef $1 / 2$.
308. The more specific Division of the House into Four Square Rooms, -a typical simple Order of arrangement-has as its Clef $4 / 4$. (Compare 2.2, t. 248). This Principle of Fractional and Subjective Quartism (or Quarterism) governs extensively in the Outlay of Being, as, for example, the Four Quarters of the Animal Body, the Four Quarters of the Heavens or Outspread of the Earth's Surface, intervening between the Four Cardinal Points of the Compass; more vaguely, the Quarters of a Camp, of a City, etc. In Spanish, the word Quarto, from the Latin Quartus, a Fourtr, is the word which signifies a Room, in a house. (Similar uses characterize the remaining Fractional Clefs $3 / 3,8 / 8$, etc.) This is Endospacio and Subjective Order. The Domain so distributed is the Subjectiv-

ISMUS, whether of the Universe at large, or of any Minor Domain of Being, within, and echoing to, the entire Universe. The Order of Distribution itself, as a Mere Scheme of Relations, is the Sciento-Abstractismus of the Subjectivismos. Such is the General Analogy of the Fractions, The Fractionismus of Number or of the Numerical Domain (The * Numerismus), to the Elementismus of Universal Being.
309. The Subjectivismus of Humanity is that which concerns the Individual Members of Society as Individuals; and mentally, it is that which is within the Individual Consciousness of each person. This stands opposed to Society as such, the Objectivisuus of the Whole Human Domain, the Encompassing Human Medium, in which Individuals, as the Constituent Monads of Society, live, move, and have their being. The Fractionoid Distribution (Clef $1 / 1 ; 2 / 2$ or abridged, thus, $1 ; 2 / 2$ ) within this Subjective Domain, and considered in respect to the Mind, relates to Rational Adjustments of the parts of the Individual Character. The Clef $1 / 1$ may indicate the Inherent Self-Centering Wholeness (or Holiness) of Character ; "the Single Eye;" or the Simplicity and Goodness, in Sentiment, of the Entire Character, aided by Inspiration and Good Intentions; or else the Self-Conscious Ego. The $2 / 2$ may denote the balance of character, consisting of the Enlightened Judgment from Intellectual Perception, or else, the whole Mind and Reason ; and $3 / 3$ will then mean the Combination of those two Grand Bases of Character.
310. The corresponding Whole-Number Clefs 1; 2; 3, relate, as stated above, to External Order,-The Exospacic or Objective Order of Existence. This is the Order of the Relations of the Individual Object or Person to other Objects or Persons, outside of the Self, or of the Identical Inscribed Sphere. It is the Scheme of Arrangements, as between such Objects or Persons in the Surrounding Organismus or System, (as of Society). Thus in respect to Houses, these Clefs would indicate, not the Internal distribution of the apartments, but
the External adjustment of several houses to each other, with respect to the regularity and harmony of their positions, in the Cluster or System of houses, which might constitute the Village or City. In respect to planetary bodies, they would denote, not the individual Planetary Body cut up by Equators and other lines, but the External Relations of many such to each other in Space and Time, and in the Constitution of a System-as, for instance, the Relations of our Solảr System, by Kepler's three Laws. This Ulterior Exteriority is repeated, however, by the Immediate Exteriority, which is the mere Outside Aspect of the Single Object, as contrasted with the Interior or Viscerismus of the same Object or Body. (t. 307).
311. In respect to Individual Man and Woman, these Clefs would signalize their Relations, and the Order and Harmony of their Consociations in the Collective Mass, or as the Constituent Parts of the Larger Human Organismus which we call Society; or, more restrictedly, of the Church, the State, etc. As the Fractionismus of Number corresponds, therefore, to the Internal Man (Visceral), as he stands related to his own Conscience, and to God ideally Conceived of, so the Integerismus is related to Society and to Man in his relations to that Human Governor or Social Pivot who may stand to him in the place of God, and, thence, to Society as a Whole.
312. In this Outer Objective Relation Men reappear indeed, first as Individuals ("Single Men," or "Single Women," unmarried)-the mere Monads of Society-repeating Chemical Atoms, Planets, or Single Objects in Mass-"the Masses," in fine. In this sense they are under the Clef (1.). Secondly, they undergo the action of Elective Affinity, and are married or coupled, in accordance with Sexual Laws, in which case they come under the Clef 2,-these Laws being Abstract, Equational, Mathematico-Logical (typically), and Exact. Finally, the Clef 3 denotes the Embodied and Systematized Aspect of Society (Astronomic) under the joint Constituency of Individuals and Masses on the one hand, and of Marriage
and other Relations on the other. Society is the Individuals (and Masses) of Society as Entities plus their Intangible Abstract Relations, culminating in the Institutions of the Collective Life of Humanity ; hence Government ; the Church and the State.
313. Entity and Relation are the Elementary Constituents of Being, to which Number, the Individual Unities as Entities, and Form as the Aggregate of Relations, correspond ; Form is repeated again within Number by the Interposed ThoughtLines by which the Units are constituted into Sums. (c. 8, t. 143, t. 531).
314. Fractionismology is, in other words, Structurology, Structure being that which is Subjective, Internal, or Constitutive of the Individual (Object, Planet, Edifice, or Human Being) ; Integerismology is, per contra, Systematology, System being taken for that which is Objective or External, (from the Standing-point of the Individual), and constitutive of that Ideal Abstractoid Net-work of Relations within which the Individual is encompassed, and to which he belongs, as a Member to Society ; or to any Collective Order of Being whatsoever, Class, Genus, Species, Ascendant and Descendant, Collateral, etc., to which he pertains ; as, in fine, the Atom to the Mass. Take, as illustrative of this kind of Scientific Difference, the Structurology and the Systematology of the Vegetable Kingdom, the two-fold basis of Botany, as they furnish the respective titles of the two volumes of Gray's treatise on that branch of Science. Structurology is Physiological (more properly Biological), and Systematology is Sociological, in character, analogically speaking. Structural and Systematoid are the better forms of the correlated Adjectives, as the term Systematic has other less specific meanings, and would involve ambiguity. We have ascended here from (1.) $1^{\text {th }}$ to (1.) $3^{\text {rd }}$. c. 1 .

[^49]315. Fractions, to resume, have as their leading Analogues and Clefs, but still Subjectively or Interiorly, that which is exhibited in Scale in the following Table.
$$
\text { TABLE } 16 .
$$
3. Integration, or Synthesis, or Compound Wholeness, $3 / 3$
2. Differentlation, or Afalysis, $2 / 2$.

1. Integrism, or Sfastasis, or Simple Wholeness, $1 / 1$.
2. The typical Instance or Monad of Integrism is the aspect of Simple Wholeness (t. 306), that of Differentiation or Analysis being Halfness or Equation, and that of Integration or Synthesis being the Univariety of Whole-and-Halfness cardinated upon each other; whence the Clefs $1 / 1,2 / 2$, and $3 / 3$, respectively. Integrality, whence the name of the New Philosophy, Integralism, is the larger and inclusive term, related to these three as Tri-Unity is related to Unism, Duism, and Trinism (Tab. 12, t. 211) ; but including this distribution also.
3. It will now be perceived that the whole of the preceding treatment of the Clefs $1,2,3$; the Spencerian distribution of Scrence; falls within the Systematology, or the Objective Half of the Clef 1.2, and that there remains to be considered the Structurology, or Subjective Half of the Same, (1.2) ${ }^{\frac{1}{1}, 2}, 2,3 / 3$. At all events, in the preceding treatment of the Spencerian Domain, these two aspects of the subject were not sufficiently discriminated from each other.

Ascendant and Descendant, Collateral; etc., are chosen on account of their familiarity, as occurring in Natural Science, and in the Naturismus or Non. Scientized Organization of Society. The Higher and Truer ideal of System and Orcler, and that which Systematology normally and more characteristically embraces, is found in the Perpendiculars and Levels, and the Relative Indices or Clefs, of Mathematical Outlay or Plans, the Analogues of Statutes, Laws, Rank, Order, and Edficial Institutions in a Society scientifically and exuctly organized. Thus the Integer (2.) is the Clef of Exactology ; $\mathbf{1}^{\text {st }} ; \mathfrak{2}^{\text {nd }}$ of Ascending and Descending Relationship; 2; $\mathbf{2}$ of Collaterality; and One, Many, All, of The Special (Species), The General (Genus), and The Universal. It is then by echo of Analogy that these are taken to illustrate a Sistem of Relations.
318. This new Domain (1.2) $1 / 1,2 / 2,3 / 3$, is somewhat obscure. What is the Subjective Aspect of Massology (the Ab-stract-Concrete Sciences of Spencer), of Chemistry, for example? Here it may be safest to suggest merely, and I accordingly propound as probably belonging in the Clef (1.2) ${ }^{1 / 1}$ ), the Doctrine of "Progressed Simples," brought forward by the late Prof. Mapes, as that Chemistry within Chemistry, for which all Ordinary Chemical tests are inadequate, but which, nevertheless, demonstratively exists, as proven by effects.
319. For the Subjectivology of Concretology, (namely, of The Concrete Sciences of Spencer, Corporology (1.2) $3 / 3$ ), I suggest as an instance, Physiological Intuition, or the Knowledge of the Relations of External Nature, and of the Adaptation of Simples or the Products of Nature to the Nutrition and Cure of the Bodies of Men and Animals-which seems to be the spontaneous inheritance of certain persons.
320. Finally, for the Subjectivology of Exactology (that is to say, of the Abstract Sciences of Spencer (1.2) ${ }^{2} / 2$ ), I suggest, as an instance, those Extraordinary Psychological Phenomena, in which, in exceptional cases, there seems to be immediate revelation, (Interior, Subjective, Absolute), of the most abstruse and yet exact relations of Number, and, perhaps, of Form and Force also, as in the case of Zerah Colburn; where the intermediate processes of what may be called, for the sake of contrast, Objective Calculation, seem to be dispensed with.
321. We may, perhaps, reckon here the Intuitional Perception of the Internal Outlay of Being by analogy with Objective Form, in so far as these Subjective Revelations of Universal Structure may have risen above conjecture and the obscurity of mere mysticism. Some of the utterances of Plato and Swedenborg seem to belong to this Order. These relate basically to the Necessary Thought of Halving, as the First Step, or the Intellectual Monad, of all Regular Subjective or Internal Distribution. Brought out, and intellectually demon-
strated, and so made objective as Science properly so called, this is Analogic, which has the same relation to Co-existexces (or Side-by-Side-ness), which (Cata-) Logic has to Cosequevces, or Succession in the Chain of Reasoning. c. 1-9.
322. The Bi-lateral Constitution and Symmetry of a Planet, the Earth, for example, from Hemispheres, united, while severed at the Equator, and tending away oppositely to the two Poles, finds its analogy in the Bi-lateral Constitution and Symmetry of the two Sides of the Human Body, uniting while severed at the median Line, and tending outwardly to the two arms. Each side of the Body is, in a lower sense, a Complete Individual ; the two standing side-by-side of each other, SubJECTIVELY or within the body, and so indissolubly married to each other as the indispensable condition of the larger Individual Existence; - although in Hemiplegia or One-sided Paralysis there is a wonderful exhibition of the proximate independence of the two subordinate Individuals so united. The two Sides of the Body are correspondentially Male and Female, respectively. This is related to Plato's idea, that

Commentary t. 321. 1. At my request, my pupil and collaborator, Prof. M. A. Clance, of the Pantarchal Unirersity, has furnished me the following Commentary upon this text:
"Mr. Buckle, reviewing John Stuart Mill, condenses the latter's researches in reference to Logic (Catalogic) as follows:
2. 'Logic, considered as a science, is solely concerned with Induction; and the business of Induction is to arrive at Causes; or, to speak more strictly, to arrive at a knowledge of the Laves of Causation. So far Mr. Mill agrees with Bacon; but from the operation of this rule he removes an immense body of phenomena which were brought under it by the Baconian philosophy. He asserts, and I think he proves, that, though Uniformities of Succession may be investigated inducticely, it is impossible to investigate, after that fashion, Uniformities of Co-existence; and that, therefore, to these last the Baconian method is inapplicable. If, for instance, we say that all negroes have woolly hair, we affirm a uniformity of Co-existence between the hair and some other property or properties essential to the negro. But if we were to say that they have woolly hair in consequence of their skin being black, we should affirm a uniformity not of Co-existence, but of Succession. Uniformities of Succession are frequently amenable to Induction: Uniformities of Co-existence are never amenable to it, and are consequently out of the jurisdiction of the Baconian philosophy.

Man and Woman were primitively Hemispheres sundered from the same sphere, and ever seeking to return and possess their own. It is the foundation, also, of Swedenborg's celebrated doctrine of Conjugiality.
323. In the larger Organismus called Human Society the two Sexes again repeat and correspond,-Objectively from the point of view of the Individual Monad in Society, but still Subjectively, or within, from the point of view of Society as a Whole-to the two Hemispheres of the Individual Planet, or of the Total Heavens as an Ideal Globe; or to the two Side-Halves of the Individual Human Body. (t. 322).
324. So, finally, the Individual Bridegroom and his Bride, in the Coupling or Match which is the proper Social Monad of Society (above the Individual) ; standing side-by-side of each other; repeat the two Side-Halves of the Individual Body; each, however, a Complete Individual, in a higher sense than the Side-Halves of the Individual Body, and capable of a more absolute autonomy. The Relation here, too, is Objective, from the point of view of the Individual. It is

[^50]not so primitively and absolutely indispensable, as the Static Condition of Individual Existence ; but none the less so to the Continued Existence of Society.
325. As Objective, this Sexual Matehood comes under the Exactology-Clef carried up, by the proper Notation, to the top of the Table, or the region of Man. It suggests, therefore, Analogic universally, and, by another echo of Analogy, the Algebraic Equation. It is a question for Science whether in this latter case the Conjugiality is, in its Normal or Legitimate character, in accordance, in other words, with the behests of the Divine Social Code, equally fixed and indissoluble, as in the case of the two Sides of the Individual Body; whether it is so by the Higher Spiritual Law of Man's Individual Nature, and whether it should be so by the enacted Laws of the Legislative Authority. This question involves in its solution all the subtle and difficult and abstruse questions affecting Love, Marriage, and Divorce; and, through them, the whole consideration of the Final or Millennial Cast of Human Society. The world has sought, hitherto, to adjust these mat-

Consequences and Concomitants. That the pain has a cause, I am well assured. But for aught I can tell, the blackness and the woolliness may be ultimate properties which are referable to no cause; or, if they are not ultimate properties, each may be dependent on its owon cause, but not be necessarily connected. The relation, therefore, may be universal in regard to the Fact, and yet casual in regard to the Science.
3. 'This distinction when once stated is very simple ; but its consequences in relation to the science of Logic had escaped all previous thinkers. When thoroughly appreciated, it will dispel the idle dream of the universal application of the Baconian philosophy; and in the meantime it will explain how it was that even during Bacon's life, and in his own hands, his Method frequently and signally failed. He evidently believed that, as every phenomenon has something which must follow from it, so also it has something which must go with it, and which he termed its Form. If he could generalize the form-that is to say, if he could obtain the law of the Co-existence-he rightly supposed that he would gain a scientific knowledge of the phenomenon. With this view he taxed his fertile invention to the utmost * * * *. Yet, in regard to the study of Co-existences, all his caution, all his knowledge, and all his thought, were useless. His weapons, notwithstanding their power, could make no impression on that stubborn and refractory topic. The laws of Co-existences
ters, solely or mainly, through Tradition and Authority, if we except a few spasmodic efforts, as in the times of the French Revolution, to inaugurate some crude and ill-digested theory. But Tradition and Authority, Inspiration and Special Illuminations even, address themselves to the Particular Faculty in Man, Science alone to his Universal Faculty.
326. It will be ultimately through Science, therefore, and specifically through Scientific Analogy, that the intricacies of the Social Question will be threaded. Hitherto there remain in the world the same conflicting opinions and usages, the same incoherence and cháos, in respect to it, as in respect to religious subjects, more generally. Polygamy, Monogamy and broader views of Freedom jostle each other, in passing from country to country, or from one social circle to another ; nor is the divergency growing less, but greater. Who would have thought, thirty years ago, that in this decade, next to Slavery the most embarrassing political question in the United States of America would be the Polygamic Institution of the
[ANALOGIC] are as great a mystery as ever, and all our conclusions respecting them are purely empirical. Every Inductive Science nono existing is, in irs strictit scientific part, solely a generalizution of Sequences. The reason of this, though vaguely appreciated by several writers, was first clearly stated and connected with the general theory of our knowledge by Mr. Mill. He has the immense merit of striking at once at the very root of the subject, and showing that, in the Science of Logic, there is a fundamental distinction which forbids us to treat Co-existences as we may treat Sequences; that a neglect of this distinction impairs the value of the philosophy of Bacon, and has crippled his successors; and finally, that the origin of this distinction may be traced backward and upward until we reach those Ultimate Laws of Causation which support the fabric of our knowledge, and beyond which the human mind, in the present stage of its derelopment, is unable to penetrate.
4. 'While Mr. Mill, both by delving to the foundation and rising to the summit, has excluded the Baconian philosophy from the investigation of Co-existences, he has likewise proved its incapacity for solving those Vast Social Problems which now, for the first time in the history of the world, the most adranced thinkers are setting themselves to work at deliberately, with scientific purpose, and with something like adequate resources;' (1)-that is to say, historically and observationally, but none whatever logically.

[^51]Mormons? The next great Social Agitation will cover the whole ground of the true status of Woman in Society, and the true Relations of the Sexes. History and Experience, merely, are wholly inadequate to the solution. The final answers to these, the most delicate questions affecting human affairs, will require the aid of the most radical understanding of Universal Laws. Competent investigators in this sphere of inquiry are only those, first, who are brave enough fearlessly to inquire ; secondly, those who can compel in themselves that indifference to results which will prevent them from importing, as factors of the solution, their own prejudices, preconceived opinions, or personal preferences ; those, in other words, with whom the Truth on the subject is more important than that it should prove to be of any particular Complexion, to which their peculiar dogma, fancy, organization, or experiences may have inclined them, as Individuals.
| 327. The Competent Investigator, indeed, in any branch of Social Science, above the mere Statistics of common life, is he who can most completely take his own personality out of the

[^52]inquiry, and study the subject Objectively; as much so as he would study the moves in a game of chess played by indifferent parties, or as he would solve a mathematical problem. In so far as he lets his Feeling into the subject his competency is vitiated. It is not, primarily, a question of what he or she would choose, but a question of what the highest conceivable well-being of Humanity demands, -this again tested by the known operation of Universal Laws. To investigate in this sphere requires, therefore, the impartiality of the umpire or the judge, or, in one word, it requires the true Methods of Science; the absence of any undue leaning to the New or the Old.
328. In other words still, it is only those who can pray with unfeigned sincerity to be led into the Knowledge of all Truth, how much soever it may crucify the Affections, or set aside the the most cherished Opinions, who have the right,-in the most radical sense of the word Right,-to discuss even, so solemn a question; upon the wise answer to which will hang the destinies, in a great measure, of millions of Men and
mary Syllogistic, or backward, as Iyduction (Inverse Syllogistic). (See Hickok's Empirical Psychology, pp. 147-150). It finds, therefore, its appropriate analogue in the Progression of Time-or in its Retrospective aspect. So long as Primal Causes are unknown, the Induction which founds the Reasoning, must be from Effects to Causes, and from Causes to anterior Causes, until the Ultimate Cause is reached or assumed.-The elimination of disturbances by which modern thinkers have clarified the Induction of Aristotle, has consisted in stripping the Proposition of those adjuncts which tend to complicate the question of Sequences with considerations of Co-Existences; because, as is now apparent, the application of the Simple Inductive-and-Deductive Method must be 'absolutely impotent' in its endeavor to travel upon two lines which are side-by-side of each other, Space-wise; or upon the Cros--line or Parallel Cross-lines of connection between the Successive Points, at equal Distances outward, along any two such Radii or Time-Lines signifying DifferEnt Series of Sequences.
8. "The final point in this bachroard march of progress tozard a Prime Cause -represented in the Diagram (No. 4, t. 188) by the Centre of the Circlebeing once attained, howerer, an entirely new character of the Procedure is taken on, in a double sense. First, a veritable Terminal Conversion into Opposites occurs,-so that the Progress is for the future solely outicard and

Women as yet unborn. Else, "Draw not nigh hither: put off thy shoes from off thy feet; for the place whereon thou standest is holy ground." (1). A profound consciousness of the Purity and Sanctity of Love, a well-assured Confidence in one's own possession of clearness of intellectual perception, of an unbiased judgment, and of unbounded devotion to the Right, and to the supremest happiness of Mankind ; to all which should be added the aid of an infallible Scientific guide as compass and chart;-these are the only sufficient warrant for propounding a Positive Doctrine, almost, it may be said, for entertaining a positive opinion on the subject. Again, to change the illustration, such are the requisite qualifications of the Social Surgeon who should be competent to probe the great Social Ulcer which the balm of Christianity, applied
onvard from the attained Centre of Research, and a Universal Deduction (Catalogic) takes the place of a wavering and tentative Induction (Obserration and Analysis). In the second place, it is obrious that the first step forward in this Deduction, from the Universal Centre of Reasoning or Principle, upon whatsoever Line of Sequences, is accompanied by a smewise step, on either band, (through the diverging of the radiation from the common centre), which Sidercise step holds Precise Mathematico-Logical relations, capable, therefore, of Exact Scientific treatment, with the lengthwoise step forward and outward. These Steps in Extension, or Sidewise Expansion, are, in other words, exactly co-ordinated with the step in Protension and-are related to Space precisely as the other is related to Thie; and hence, to Co-Existences in Space, as the other to CoSequences in Time. Not only; therefore, is Deduction rendered universal by securing a Unirersal Intellectual Fountain of Causation; but, behold! another new and most resplendent marvel of Scientific Discovery reveals itself, at the same instant, in the collateral fact, whereby The Science of Analogic is definitely constituted. It is in this manner that Analogic holds the same repetitory' relationship to Extension, to Co-Existences, and to Space itself, as one of the Universal Continents of Being, which Logic holds to Protension, to Co-Sequences, and to Time, the other joint Universal Continent of Being.
9. "Thirdly and finally, the Pantologic, to result from the interworking Composity and harmony of the Regenerated and Completed (Cata-) Logic, and the almost unhoped-for, new and genuine Science of Analogic, must be exhaustive and complete; must be, in fine, inaugurative of a new era." M. A. C.
during Eighteen Hundred years, has utterly failed to cure. The dominance of crude passion, and equally so that of blind sentiment, and, finally, that of theorizing sentimentality, must be set absolutely aside from this inquiry.
329. To resume : The Hemisphere, in any bi-lateral conjunction of Being, which at first presents itself as Male or Masculine, exhibits, in the next instant, attributes which seem to be Feminine ; and so contrariwise of the Female. That is to say, the Male is usually reckoned as Positive relatively to the Female, and the Female as therefore Negative, in the same relation. But no sooner have we settled upon this understanding of the subject than it presents itself in some new aspect throughout, and the Female functionates as the Positive, and the Male as the Negative party. Hence, we are, in the first place, referred back from the Sexual discrimination to the more radical Positive-and-Negative distinction which rests, in turn, upon the Something and Nothing, as Original Constituents of Being. The Right and the Left Sides thus become exponents of the Positive and Negative Potency respectively, and, in some sense, alternately. In the next place, we discover a perpetual See-sazo, or mutual interchange of position, between these two ; as, when the body turns around, that which was Right becomes relatively Left, and rice rersa; when it turns back the original position being resumed. Or, as a better illustration, when the right foot is put forward in walking, that foot is positive in function, and the left is negative or passive ; but at the next instant, the left foot is active, and the right is passive; while, howerer, the whole body has advanced to a new position by means of this Dialectic (Gr. dia, ACROSS ; and legein, to SPEak, like dis-cussion-counterpoints ; counter-positioning). This is the connection between the Ideas or Type-Forms of Plato,-basically, as we have seen, the Bi-lateral Symmetry of the Primitive Something and Nothing as Universals, -and the whole Philosophy, or Science of Ideas, which he denominated Dialectic. This Dialectic or

Counter-positioning of the two Sides of any development whatsoever, based on the Primitive Difference of the Something and the Nothing, is, finally, the distinctive feature of the Philosophy of Hegel. We pass backward, therefore, naturally and easily from the Clef $1.2 / 2$ to the Clef 1.0 ; from the Subjective Department of Science as a Special and Obscure Domain, to the broad and somewhat Indeterminate Realm of Universal Philosophy. The most determinate or Science-like section of this new Sphere is, however, precisely this doctrine of Dialectic.
330. The following is Schwegler's account of the Dialectical Basis of Hegelianism :
"Hegel's dialectical method is partly taken from Plato, and partly from Fichte. The conception of negation is Platonic. 'All negation,' says Hegel, 'is position, affirmation. If a conception is negated, the result is not the pure nothing-a pure negative, but a concrete positive; there results a new conception which extends around the negation of the preceding one. The negation of the One, e. g., is the conception of the Many.' In this way Hegel makes negation a vehicle for dialectical progress. Every pre-supposed conception is denied, and from its negation a higher and richer conception is gained. This is connected with the method of Fichte, which posits a Fundamental Synthesis; and by analyzing this, seeks its Antitheses, and then unites again these antitheses through a second Synthesis-e. g., Being, Nothing, Becoming, Quality, Quantity, Measure, etc. This method, which is at the same time Analytical and Synthetical, Hegel has carried through the whole system of Science." (1).
331. Before attending to the distribution of Philosophy, we are, however, to complete the previous investigation by giving a passing notice to the Indeterminismus of Number (One, Many, All), and to its Analogical Relations in the Echo-,

[^53]sophismus. I have previously observed that this Sphere of Being falls more especially within the Philosophical Domain, which, in the Aggregate, is characterized by greater Indeterminateness than belongs to Science properly so called-but, in a subordinate way, it finds its place also in Positive Science.
332. Each Special Science has within Itself an Indeterminate Department, as contrasted with the Determinate and more properly Scientific portion of the same Science. An instance of this is found in Chemistry, for example, in what relates to Mixtures and Amalgams, the region of Indefinite Proportions, as contrasted with the more properly Scientic Department of Chemistry, that in which the Law of "Definite Proportions" absolutely prevails. The difference is as that in respect to Number between Singulism and Pluralism (Oneness and Manyness) on the one hand,-Indeterminate,-and Unism and Duism (Oneness and Twoness), on the other hand, -Determinate. Chemistry as a whole, as characterized by its Determinate Portion, by virtue of which it is made a Science in the strict sense of the term, belongs under the Clef 1 ; but the Indeterminate portion of Chemistry, or of Any Science, may then be discriminated by the Addition of the Clef ~, which has the Indeterminateness of One, Many, All, as appears in the Crucial Schema of the Universe. ( $t$. 234).
333. The sign $\sim$ is employed in Mathematics to denote mere Indeterminate Numerical Difference. Its appropriateness here is therefore obvious. I have adopted the expression One, Many, All, as the ruling form of this idea from Kant (t. 217); although the discrimination One, Some, (Few, Many), All, as shown in the Crucial Schema, is more special and accurate. The Many naturally usurps the place of the Sone, (Fr. quantité), and stands representatively for it, precisely as we say Magnitude (Lat. magnus, Great) for Dimension generally, whether really great or small, to the exclusion of the equally authentic, but almost unknown word Minitude (Lat. minus, Less).
334. The question now naturally arises: What is the Indeterminismus of the Scientismus generically-(1.2) ~ -as distinguished from the Indeterminate portion of the Special Sciences ( $t$. 332)? My reply to this is, that it is the Department of Scientific Classification, which is an Indeterminate Distribution of the Manyness of Particular Objects within the Unity of a Class, Genus, or Species. Geveralizamion and Classification are habitually classed together, in scientific parlance, as very universal Attendants upon Science, the Preliminaries or Conditions, as it were, of all Science; themselves not properly Sciences, nor their locality in the Scientific field anywhere very accurately defined. I shall now be understood when I say that Generalization, under the Clef $\pm$, in addition to its occurrence within the body of each special Science, as Unismal and preliminary there, furnishes, by itself, the Grand Unismal and Logically Preliminary Department of Science,-in a sense a Universal Science-called Natural Philosophy; the word is taken in the large or Comtean sense of the term as previously pointed out. It is the Science which I have elsewhere denominated Generalogy. It has its Classification, under the Clef $1 \sim$; in addition to its occurrence within the body of each Special Science as just shown in what precedes; and its own Universal and General Laws, and will also constitute a distinct Grand Department of Science. It will be one of the tasks of Universology to elaborate it as such. The subject will recur, in other connections, in the present work. (t. 338).
335. Prof. Vander Weyde, of the Cooper Institute, has furnished me, in advance of publication, some of the sheets of an extensive classification of all our mental acquisitions, now in preparation by him, far more elaborate in detail than any which has preceded it. All Human Knowledge he divides, in the first instance, into 1. Sciences, and 2. Arts. This accords in Principle with the Grand Distinction, as insisted upon in this work, between Statron and Motion, or Exist-
ence and Movement, Science repeating by Analogy Station or Rest, Space, or Mental Expatiation as mere Knowing apart from Doing ; and Art repeating in the same manner Motion or Movement, related to Time and Doing, as distinguished from Abstract Knowing, which is Science, (and from Being merely, which is Nature).
336. He next distinguishes, within the Domain of Science, Mental Philosophy from four remaining branches to be mentioned presently. This he makes include both what I have called Philosophy, and placed at the bottom of my Typical Table (t. 40), and what I have denominated Man (Anthropology), and placed at the top of the same Table. The Region which I assign to Pneumatology he has omitted altogether. His four remaining branches of Science are: I. Positrve Screxce, divided into 1. Nathematics, and 2. The Science of Nature. This approximates the Abstractology and Concretology of Spencer. II. History ; III. Languages ; and IV. A Knowledge of Trades developed by the real and imaginary wants of Society, what I should call Artisanship, and regard as a lower department merely of Art. As History is also an account of the Res Gestce, or things done in Time, it also falls within my larger understanding of the meaning of Art. The basis of History is Chronology, the Science of Time (Gr. Chronos, Tme). So again of Language in its Art-Side.
337. Dismissing the further pursuit of the other parts of this Distribution, let us give a little further attention to the Subdivision of the Science of Nature. This our author divides into two Branches, the first of which he calls "Natural PhiLosophr, the Examination and Explanation of Natural Phenomena, in a general sense." This is the region occupied by all the lucubrations of M. Comte, if we add a foundation laid in a similar general view of Mathematical Science. This view, on account of its Generality, Comte denominates Abstract, while the Special investigation of the Sciences, Echosophy proper, he calls Concrete. This use of the terms Abstract and

Concrete, where Generality and Speciality are alone meant, is sharply and justly criticised by Spencer. (1). The larger meaning of Natural Philosophy here intended must not be confounded with a narrow use of the term which has obtained a footing in England and America,-including no more than certain branches of Physics and Mechanics in their most Special aspect. To avoid this confusion, and for the intrinsic excellence of the designation, notwithstanding a certain uncouthness of the expressions, I shall sometimes designate this Department of Science, Generalogy. And inasmuch as the Domain of Natural Philosophy embraces The General Conditions of Being, or The Conditioned, as contrasted with The Unconditioned, which is the Special Domain of Speculative Philosophy, the Appropriate Clef for its Notation is + - or $\pm$ (See Crucial Schema, t. 234, 334).
338. For the remaining Branch of Cosmical Science, this author finds no single term, but describes it as the "Simple contemplation of the Objects of Nature." Let us discriminate this on the contrary as Specialogy. This he subdivides into: 1. The Consideration of the Heavens, which he denominates Cosmography, for which I have, however, preferred the term Uranology (Gr. Uranos, Heaven). 2. That of the Earth, for which he has no name, and to which I have applied the term Tellurology (Lat. Tellus, the Earth). This last he divides into 1. "The Products of the Earth," the Science of which I will denominate Regnology (Lat. Regnum, a Kingdom), the well-known Science of the Three Kingdoms, Mineral, Vegetable, Animal ;-Mineralogy to be taken, in an enlarged sense, to include Geology and the related Sciences ; 2. Hydrology, and Hydrography (Gr. Hudor, Watere); and 3. Aerology (Pneumatics, etc.)-(Lat. Aer, the Air).
339. The discrimination between Generalogy and Specialogy, recognized by Comte and Vander Weyde, is wholly

[^54]omitted by Spencer. It is not inserted in The Fundamental Exposition (Tab. 15, t. 278), which is confined to the Special Sciences. The other distinction of Vander Weyde, also omitted by the other authors, between Celestial and Terrestrial Science, I have placed in the Table under the names Uranology and Tellurology, between which I have inserted Meteorology, covering, as it were, the domain of Mid-air, the Meteoric region between the Heavens and the Earth-all branches of (3.) 2. (t. 278). These three Domains repeat the three Stories of Elevation in the primitive and larger distribution (Typical Table, t. 40) into Anthropology, Pneumatology, and Cosmology. The Parallelism between the two Series is shown in the following Table.

## TABLE 17 .

2. Grand Departments of Knoulfdge.
3. Anthropology (Celestial).
4. Pnedmatology (Aerial).
5. Cosmology - (Earthy).
6. Corresponding Divisions of Concretology.

| Uranology | (Celestial).) | گ |
| :---: | :---: | :---: |
| Meteorology | (Aerial) |  |
|  |  | - |
| Tellurology | (Earthy). |  |

Or, distributed by Clefs, thus :

| (1.2) $3^{\text {rd }}$. | (3.) 2$) 3^{\text {rd. }}$ |
| :--- | :--- |
| (1.2) $2^{\text {nd } . ~}$ | (3.)2) $2^{\text {nd }}$ |
| (1.2) $1^{\text {st. }}$ | (3.)2) $1^{\text {st. }}$ |

340. We come now to the Distribution of the proper Domain of Philosophy, of Naturo-Metaphysic specifically, as the SubJective Counterpart of Echosophy, which is OBJECTIVE. Each has, however, within itself, an echo of the other ; that is to say, Echosophy has a Minor or Subordinate Department, which repeats locally the whole Philosophical Domain ; that in other words, which is relatively Subjective, although still within the Objectivismus of Knowledge. So, on the contrary, Philosophy has a Minor Department answering to the Positive Sciences; a Branch or Aspect relatively Objective, although still within the Subjectivismus. The Clefs $1.2 / 2$ and 1.0, as they
have just now been discussed (as Subordinate Clefs) belong, as already stated, to the Subjectivismus of Echosophy. They furnish, on the one hand, therefore, a natural Transition to Philosophy, the true Subjective Domain, while, on the other hand, they will be therein repeated, simply from a different, and more subjectively radical, point of view. They are here, then, to be cursorily distributed in accordance with the plan or pattern instituted in what precedes, for the $1 ; 2$. They are to be brought forward as Primary Clefs; not as Secondary and Subordinate ones, as in the previous case.
341. The Clef $1 ;{ }^{2} / 2$ denotes The Fractions, which continue The Ordinal Series of Numbers, downward and backward (see Cructal Schema t. 234), and so into the Bowels, Viscera, or Vitals of the Individual Unit. This, then, is within The Subjective Domain. The Fractions are the Ordinal Series of this Subjectivismus, and Counterpart therefore the Clef $1^{\text {st }} \cdot 2^{\text {nd }}$ of Echosophy, or the Objective Sciences. (t. 236).
342. The Clef 1.0 as Primitive, which it is here in the Domain of Philosophy, then counterparts or corresponds to $\mathbf{1 . 2}$ in the Domain of Science ( t . 291). This is Static and Spacio (Ex-spatiative) in character, and hence Cardinal and contrasted with the Ordinality of the Fractions.
343. Finally, the Echo, in Philosophy, to $\pm$ for Natural Philosophy ( t .337 ) in Objective Science, is $\alpha \infty$. By examining the Cruclal Schema (t. 234), it will now appear that the Cardinal Series, The Ordinal Series (of Numbers), and the Plus-Minus-Equation-Basis of Numerical Relations go conjointly to the Representation of Echosophy, or the Objective Sciences ; and that, contrariwise, the Abortive One-Zero Series, together with The Fractions, and the Signs of Unconditional-ity,-The Absolute and the Infinity of Number-go to the Representation of Philosophy, or of the Subjective Domain of Investigation.
344. The Vitalic or Visceral region of Philosophy $(1 ; 2 / 2)$, is Theology, as the Scientific Inquiry after the Inmost First

Cause of All Being in respect to Action or Movement, Forthputting, or Creation-hence Ordinal or On-going,-while yet also Subjective Interior, or Hidden. This Echoes to Practical Science and the so-called Practical Philosophy externally. (t. 283).
345. The Middle region of Philosophy (1.0), which answers to Scientific Theory generally, or to Specialogy (1.2), I shall denominate Speculology. (Lat. Speculum, a Looking-glass or Reflector). It is the effort to discover the scheme of the Universe in respect to its Constitution and Laws by Subjective Contemplation or Reflection, mainly, without the aid of Observation and Systematic Induction. It has led to more Premature Deduction than is due even to Imperfect Induction, c. I-7, and hence to that erroneous Method in Science

Commentary t. 34.5. 1. It is very important to observe that the Terms Induction and Deduction are used with a certain amount of equivocation, and even of contradiction, in their meaning, insomuch that they may be said to change places, and to reproduce each other,-a circumstance which, unexplained, is very confusing. Induction is, in strictness, synonymous (or coincident) with Analysis, and Deduction with Synthesis, to which point Swedenborg has been already quoted for definitions of the latter set of terms (a. 14, t. 198). If more recent authority is required, Prof. Henry says expressly, "Induction and Deduction are sometimes called Analysis and Synthesis." (1). Hence Analytical Generalizations, or the true Principles of Science, are reached by the Incluctive Method in this meaning of the term, and it is entitled to all the high praise bestowed upon Analysis by Swedenborg, in the eloquent sentences which follow the words quoted from him. Deduction, then, deserves the corresponding depreciation ; and each would continue, rightly enough, to hold the relative rank which they ordinarily do in the estimate of the Scientific World.
2. But, by a curious Terminal Conversion neto Opposttes (t. 83), Induction and Deduction have, in another sense and usage, precisely the opposite signification ; Induction meaning Observational, Empirical, Uncertain, or related to Facts; and Deduction meaning Purely Rational, Transcendental, Inherently Necessary and Universal, and hence Absolutely True and Certain, or related to Principles as Uncreated and Eternal. It is in this sense that Hickok habitually employs the terms Induction or Inductive, and Deduction or Deductive.
(a. 6, t. 198).
(1) Smithsonian Report, 1856, p. 189.
and Action, which I have denominated The Anticipatory Method. It is by no means, however, the unimportant or useless thing which modern Echosophists are prone to consider it.
346. Finally, the Nethermost region of Philosophy, that which answers to Natural Philosophy or Generalogy (t. 292), in respect to the Positive Sciences, is then Ontology ( $\alpha \infty$ ), or the Attempt at the Constitution of a Science of Berivg itself, (in se). This is the Ultimate of Transcendental (or Subtranscendental) range of Thinking; the region of the purely Unconditioned. The inquiry here is not, as in Theology, after the First Cause, (related to Time and Creation), but after the Primitive Ens or Ultimate 'Substance of Being, back of any manifestation whatsoever. Hence, this is the Neutral Ground of Indifference between the Relations of Time and Space, striving to withdraw itself from the Conditions of either.
3. This divergency and ultimate reversal of meaning has arisen naturally as follows: Induction being Analysis, and Analysis furnishing the true basis of all Scientific Construction or Synthesis, the Induction could only found a true and always reliable Deduction, (Construction, or Synthesis), when it should have been, itself, completed, or made absolutely radical; that is to say, when Analysis should have been carried to its Ultimates, and the Universal Principles of Science so discorered and established. Such Analysis would go through and past the domain of "Facts," and would plant itself in the heart of the domain of the Eternal and Necessary "Truths" of Being. But inasmuch as this had not heretofore been done, in any sense entitled to the character of Scientific, it has resulted that Induction in the sense of Imperfect Analysis, has been, at its various stages of Progress, continually founding a succession of Imperfect and Premature Syntheses. These, whether confined to Theory, or carried over into Practical Constructions, as in Systems of Government, or in Efforts at Social Reform, for instance, were, therefore, closely related to the Total Anticipatory Method, or, what is the same, in effect, to that Fanciful and Unauthorized Deduction, in Philosophy and Science, in which all Systematized Knowing had its origin ; that which preceded the true Understanding of the nature and requirements of Induction as expounded by Bacon.
4. It has naturally resulted, therefore, that Induction, in this continuous insufficiency of its successes and consequent alliance with failure of certainty, has acquired, in the high cast of Philosophical Minds, just that character of imperfection as a Method, which in the popular mind (of the Scientific World)
347. The following Table will exhibit the Parallelism between the Primitive Trigrade Distribution of Echosophy (Science), and that of Philosophy, respectively:

TABI世 18 .

it has itseif cast upon Deduction. This illustrates the difference between the Transcendental and the Ordinary Standing-points of observation. From this Transcendental Point of view Induction is identified with Imperfect Synthesis rather than with its own Primitive character as Analysis; and, on the other hand, Deduction allies itself as readily with Ultimate and Radical Analysis, and with the Absolute and Universal Truth in the Nature of Things; with, in other words, the Final and Normal Synthesis, whether of Theory or of Practical Construction.
5. As this Final and Normal Synthesis then lies, as it were, beyond the Ultimate and Radical Analysis, it is properly Ultranalytical (Ultra, beyond, and Avalisis); although by a Terminal Conversion into Opposites (t.83) it reverses the direction, and tends outward and upwardly to the surface, as it were, and away from the deep centre, which by the Analysis has then been penetrated. (Dia. 4, t. 188; t. 183; 187). And, again, Induction, in so far as it remains short of the Complete and Final Analysis, which yields the Universal Principles of Science, is Citranalytical (Citra, on this Side of, and AnaLysis).
6. In this secondary use and meaning of the terms Induction and Deduction, Induction (Citranalysis) is associated with merely Observational Science and tentative methods, and hence with those Preparatory Stages of Science which correspond repetitively (c. 35, t. 136) with the Proto-Socictismus, or the Old Order of Affairs ; and Deduction (Ultranalysis), with The Unity of the Sciences and with the Ulterior or Final Order in the Collective Life of Humanity. The mere Instant of the Discovery of Universal Principles and the Constitution of a True Universology by carrying Analysis to its Ultimates is, then the TURN-

It will be observed that ScIexto-PHilosophy, which appears in the Typical Table ( $\mathbf{t . 4 0}$ ) under the General Head of Philosophy is here carried to the side, omitted from the present distribution, and furnished with the Clef (1.1). This peculiarity of arrangement will be explained subsequently. ( t .476 ).
348. Let us dispose in the first instance of Theology, $1 ; \frac{2}{2}$, together with some answering Subdivisions of $1^{\text {st }} ; 2^{\text {nd }}$, which were omitted in treating of Echosophy (Objectivology). Theology is the Science of The Absolute concreted in an Ideal Active and Creative Personality (whether also Real, or not, is the fundamental question of the Science). Its Domain is, therefore, that of the Central Life and Force, or Energy, of Universal Being, or it is, as I have denominated it above, the Visceral Region. c. 1.
349. The most fundamental discrimination of Theology is into I. Arbitrishology, the Conception of God (or Gods) as
ang Ponnt or Crisis-Epoch in the Whote Career of Human Affairs, and corresponds with the Birth of Society from an Old and Prorisional Order of Life to the New and Normal Career,-the substitution, through the triumph of Science, of the Church Triumphant for the Church Militant. (t. 302; c. 1-44, t. 136).
7. In other words, in this sense the Scientific idea associated with Induction is Impure or Mixed, resting partly on the Facts of Olservation, and partly on Insufficient and Inconclusive reasonings upon those facts; and Decluction is associated with the prevalence of Pure Ideal Conceptions and Exact Laws as the guides of both our Observations and Reasonings in every Sphere and Domain of Being. Still, however, in strictness, the discorery of Universology is only the Culmination of Induction, or the Completion of Analysis, as the foundation and starting-point, and hence it is true, indeed, as Tre Head of the True and Ultimate Synthesis (c.28, t. 136) ; while Deduction is, in the same strictness, not a Method of Scientific Discovery at all, but only a Method of carrying out, and applying, the discoveries made by Induction. Scientific discovery, in the large sense of the term, is completed for all time when the Unity of the Sciences is established, in the same manner as Physical Geography was a Completed Science, from the higher or transcendental point of view, when the rotundity of the Earth and its exact measurement were determined, whatever minor and included obserrations remained to be instituted.

Commentary t. 348. 1. Compare the Latin Vis, Force, and Viscus; Plural Vis-cera, the Entrails or Vitals; the Domain of the Vital Principle in the Individual Economy.
an Arbitrary Irresponsible Will (or Wills), from which emanate the Laws of Being (as well as all Events and Changes whatsoever) ; II. Logicismology, the Conception of Law, as The Inherent Necessity of Being, the Same for God himseli as for the Created Universe ; and of God (if conceived at all) as the Administrator of Law merely (a.5; c. 32, t. 136) ; and III. Appetology (Lat. ad, to, and peto, to seek), the Doctrine of the Gracious Interblending and Practical Unity, in the Divine Nature, of Authoritative Personality and The Logos or Law-Principle, so united and modulated as to inspire the Sentiment of Charm, or the Love of God shed abroad in the Hearts of Men. Hence arises a true Worship, or a " Seeking unto the Lord." The appropriateness, analogically, of this term Appetology, will be made, gradually, more fully to appear. The Arbitrismal and Fatalistic Principles of the two previous Varieties of Visceral Energy, in the Constitution of Being, are reconciled in the natural Indiscrimination of Love, Appetite, or Charm (t. 54, 56). This, therefore, is the Noncritical and Faith-giving aspect of Theology, and that which is more properly Pietistic, and in that sense Religious.
350. The justification and significance of these discriminations will be gradually unfolded, in the various connections in which they will occur. They are more vital, more fundamental, or radical, more truly Theological, than the Fetichism, Polytheism, and Monotheism of Comte, which are Subdivisional, or, at most, Cross-divisional, of this distribution, and which have relation to Fact, and an Order of Development in Time, more especially than to the Static or Permanent Essentiality of Principle. If Absolute Monarchy prevailed all over Europe, as the Sovereignty of Particular Reigning Personality, (Arbitrismal), and if Republicanism prevailed all over America, as the Sovereignty of Law over all Personality, (Logicismal), the difference between the Systems of Government on the two Continents would be far greater, in Principle, than anything which could be involved in the Subdivisional question in

Europe, whether there was One Ruler for all that Continent, or whether there were many countries, as now, each having its own different (but in that case Absolute) Monarch ;-a difference analogous with that between Monotheism (One-Godism) and Polytheism (Many-God-ism).
351. Arbitrismology in Theology coincides (or corresponds repetitively) with Autocracy, Despotism, Imperialism, or Casarism in Governmental Affairs, or in the Sphere of Social Organization. LOGICISMOLOGY coincides in the same manner with Republicanism, or the Doctrine of the Supremacy of the Laws ; and, finally, Appetology corresponds with Government by Attraction or Charm from the Perfection of Institutions coupled with the Wisdom, Goodness, Executive Ability, and Magnetic Potency of True Leaders, the "Idols" or Social Gods of the People. Princtple (or Law) and PersonALITY so blended will overcome Schism and Rebellion; will establish Heaven on Earth; and will bring back, upon a new basis, and in a loftier and more rational sense, the Hero-worship, or the Man-God-Ism of the Primitive Ages.
352. Arbitrism, in respect to Will-Force and Creative and Governing Power, coincides with Projective Mechanical Force, Driving Force, vis a tergo Compulsion; and Logicism with Availability; the cautious Preparation of Conditions which will lead to Consent; with Management, Co-ordination, and Adjustment in Progression; with the See-savo (or Wee-voah) of Movement, as of the Walking beam of an Engine, or of the two sides of the body in walking, wagging or waddling; or the sculling movement of a boat. And, finally, Appetism coincides with Attraction or Charm, (the force of the magnet), as a mechanical mode of action, and as a means of Government, in the higher Mechanization of Society, and in the Divine Administration in all things. Th following Table exhibits this Parallelism, with the respective Clefs of Notation.

## TABLE 19.

Theology, 1.2/2. 3. Appetology, $3 / 3$.
2. Logicismology, $2 / 2$.

1. Arbitrismologr, $1 / 1$.

Dynamism of Careers, $1^{\text {st }} \cdot 2^{\text {nd }}$.
3. Attraction ; Inwoard or Return Career, $3^{\text {rd }}$.
2. Reciprocal Movement, See-Saro, $2^{\mathrm{nd}}$.

1. Repulsion, Compulsion, Projection, Driving Power, $1^{\text {st }}$.
2. The Unitarian and Trinitarian Difference in Theology has been already glanced at, as very fundamental (t. 127-132). It is, however, merely an Echo within the Arbitrismus of the major difference between Arbitrism and Logicism. c. 1-3.
3. Dismissing Theology, Speculology (1.0) is next. This Middle Region of Philosophy subdivides primarily and most basically, into I. The Cosmological Conception ; II. The

Commentary t. 353. 1. Monotheism, in any aspect of it, echoes to the Number One (1). Unitarianism and Trinitarianism are Subdivisional Aspects of this Unity. The High Monotheism or Unitarian Conception,-that of Islamism, for instance, is the Unism of the Unism, which excludes all Variety of Relativity ; it is the Pure Unism of the Theological Idea. The Relative Unity in Variety of the Trinitarians is the Duism (or Pluralism) of the same. The Trinism then resulting from, First, the distinct separation, and then the recombination in harmony of these two, -the Trinitarian and the Unitarian Conception-in a corresponding Balanced Vibration of Unity with eacie other, as the larger and inclusive Truth on this sublime subject, is the highest point attainable in this sphere of Conception, and is illustrative of the reconciliative character of the New and Higher Theology which will result from the Unification of the Sciences. God, or Nature, working in History, has wrought more subtly in the actual discriminations of Nationality and Sect than the finest metaphrsical mind has heretofore done in its most attenuated analyses. Every Race, every Nation, every Generation, and every Belief, stands a Representative and a witness for the separate or divergent Decelopment of some one aspect of the rohole Truth, and, hence, of some one Article of the Grand Compound Uni-variant Creed of the New and Harmonic Catholic Church of Humanity, about to be coustituted.
2. First-Headism is Godism;-the numbers One (1), Two (2), and Tiree (3), are the Prima Capita or Frrst-Heads of all Number. Number is the Typical or Sciento-Elementary Domain of Being. One, Two, and Three, are the

Psychological Difference; and III. The Ontological Fatth-of philosophy. (a. 10, c. 32, t. 136). a. 1-9.
355. The following Tabular Presentation exhibits the corresponding Departments, in this quarter of Philosophy and Echosophy, respectively.

$$
\text { TAB工E } 20
$$

Speculology (in Philosophy), 1.0.
3. Ontological Faith, $(1.0) 3^{\text {rd }}$.
2. Psychological Difference, (1.0) $2^{\text {nd. }}$.

1. Cosfictal Conception, (1.0) $1^{\text {st }}$. (The Subjective Cosmos).

Specialogy (in Science), 1.2.
Anthropology, (1.2) $3^{\text {rd }}$.
Pineumatology, (1.2) $2^{\text {nd. }}$.
Cosmology, (1.2) $1^{\text {st }}$.
(The Objective Cosmos).

Sacred or Divine Numbers par excellence. The question of the Unity or the Tri-Unity of the Constitution of the nature of the Divine Being has been appropriately the supreme question of Theology. Theology is the apex, as Mathematics is the basis of the Hierarchical Pyramid of the Sciences. This is demonstrated by the application of the same Law by which Comte has constituted his Pyramid, although he has illogically left it, as a truncated Cone, stopping at Sociology, and short of Theology. (t. 200).
3. The case is precisely the same, for the present purpose, whether we assign a Human-like Personality to the Being of God, or whether we rationalize his Existence into the Immanent Presence in all Being of a Central Fountain of Operation and Law. The two conceptions will in the end be reconciled with each other in the identity of the exposition they will make of the Facts of History, and, finally, of the Creation itself. To illustrate: if the Purely Rationalistic Conception be assumed, it still appears (t. 128), that the Jews are still in an unexpected sense, "the Chosen People of God," that is to say, that the Hebrew Nation has been the Historical Depository of the Highest Theological Truth; of that Compound Monotheism which, by its branching, has furnished the Pure or Absolute Monotheism of the Mahommedan Countries, on the one hand, and the Relatoid Monotheism or Trinitarianism of Christendom, on the other hand. These doctrines relate, as already shown, to the HeadNumbers, One, Two, and three, and the Jews were, therefore, even from this purely rational point of view, the Elite or Chosen among those peoples who have excelled in the profoundest instinct or intuition of these recondite Verities, in advance of that Intellectual Development which, in the proper sense of the term, ultimately discovers them.

Annotation t. 354. 1. The follow- ory, and the Ontologicar Faith of ing Statement of the Cosmological Philosophy, is extracted from the recent Conception, the Psychological The- work of David Masson (a. 10, c. 32, t.

The Cosmological Conception divides most fundamentally into 1. The Instinctual ; 2. The Dialectical ; and 3. The Elaborate, (The True Cosmical, or Ornate). By the Instinctual Cosmical Conception, I mean that Conception as it is in the Mind of an Animal, a Child, or an Adult even, who has not attained to the Rational Development which gives SelfConsciousness, or the consciousness of himself as apart from Nature, and of Mind consequently, as apart from Matter. "To Newton and to Newton's dog, Diamond," says Carlyle, "what a different pair of Universes!" This means that the Cosmological Conception of the two is different. Ferrier has dwelt intensely upon the significance of this discrimination.
356. By the Dialectical Cosmological Conception is meant the Opposite of the Instinctual, but only in the next grade of Naturalness. It is, in part, what is described by Masson as "The popular or habitual conception of mankind in general," which is, "that there are two distinct worlds mixed up in the Phenomenal Cosmos,-a world of Mind, con-
136). It is given in full as an important reference for the better understanding of the same subject as discussed in the Text.
I. The Cosmological Conception.
2. "By 'Cosmological Conception' I do, in effect, mean very much that general image of the totality of things which each one carries about with him, and which is sometimes spoken of more grandly as his 'Theory of the Universe.' The beauty of the thing for our purposes is that every one has it. A 'psychological theory' is a learned luxury which the immense majority of people may go from their cradles to their graves without consciously possessing; but every one has a 'cosmological conception,' though he may not be aware of it under that pedantic-looking name. Yon cottager who spins at her own door,
has her 'cosmological conception,' her working image of the world she lives in. There is a past of mystery, all opaque beyond her own immediate memory, or the traditions of her kith and kin, save where the Bible lights up a gleaming islet or two in the distant gloom; there is a present of toil and care, not without help from on high ; and a little way on the hour is thought of, when body and soul shall be severed-the one to its rest under the church-yard-grass, the other to that heaven above the stars where loved ones that have gone before, will mayhap be seen again :

> 'We 'll meet and aye be fain In the land o' the leal.'

And from the cottager upwards, we have endless varicties of the cosmological conception, according to character and knowledge." (1).
(1) Recent British Philosophy, by David Masson, pp. 53, 54.
sisting of multitudes of Individual minds, and a world of Matter, consisting of all the extended variety and immensity of material objects. Neither of these worlds is thought of as the other, but each of them as existing independently, in its own definite bounds, though they traffic with each other at present. Sweep away all existing minds, and the deserted Earth would continue to spin round all the same, still whirling its rocks, trees, clouds, and all the rest of its material pomp and garniture, alternately in the sunshine and in the depths of the Starry Stillness. Though no eye should behold, and no ear should hear, there would be evenings of silver moonlight on the ocean marge, and the waves would roar as they broke and retired. On the other hand, suppose the entire fabric of the material Universe abolished and dissolved, and the dishoused population of spirits would somehow survive in the imaginable vacancy. If this second idea is not so easy or common as the first, it still virtually belongs to the popular conception of the contents or constitution of the Cosmos. The conception is that of a Natural Dualism, or of the contact
3. Mr. Masson proceeds to classify the Cosmological Conceptions, which have prevailed in the recent schools of British philosophy, and in doing so he has, to a considerable extent, covered the ground which has been thought possible in any philosophy. These he divides mainly into six, with the exception of a seventh, that of Hegel, which will be subsequently noticed in the text; and of these six he furnishes a tabular statement, as follows:

1. Nihilism, or Non-Substantialism.
2. Materialism.
3. Natural Realism.
4. Constructive Idealism.
5. Pure Idealism.
6. Absolute Identity.

See for further expansions of the subject the Text Nos. 355-365.

## II. The Psychological Theory.

4. "Nothing is known to us, except in and through the mind. It is in this Consciousness, which each of us carries about with him, and which, be it or be it not the dissoluble result of bodily organization, is thought of by all of us not under any image suggested by that organization, but rather as a great chamber of aërial transparency, without roof, without walls, vithout bounds, and yet somekovo enclosed within us, and belonging to us-it is within this chamber that all presents itself, that we can know or think about. Except by coming within this chamber, or revealing itself there, nothing can be known. Whatever may exist, only as much as can break through into this sphere, or send a glimmering of itself into it, exists for our intelligence. From the farthest ends of space, from
in every act of perception of two distinct spheres, one an internal perceiving mind, and the other an external world composed of the actual and identical objects which the mind perceives.
5. "On the very first exercise of philosophic thought, however, this conception is blurred. An immense quantity of what we all instinctively think of as existing out of ourselves, turns out, on investigation, not to exist at all as we fancy it existing, but to consist only of affections [effects produced upon or in] the perceiving mind. The redness of the rose is not a real external thing, immutably the same in itself; it is only a certain peculiar action on my physiology which the presence of an external cause or object seems to determine. Were my physiology different, the action would be different, though the cause or object remained the same. Indeed, there are persons in whom the presence of a rose occasions no sensation of redness such as is known to me, but a much vaguer sensation, not distinguishable from what I should call green," etc. (1).
the remotest moment of time, whatever fact, object, or event would be known by me as happening or existing, or as having ever happened or existed, can be so only by having itself announced, somehow or other, within this present room or chamber which I call my mind. That comets are at this moment pursuing their curves at mighty distances unseen from our Earth ; that there was a period when the Earth was a cooling mass of hot matter not yet habitable by organisms known to us; that there came a later period when it was possessed by strange saurians and other animal forces now extinct; that there once lived a Julius Cæsar ; that the Earth is a spheroid; that there is an Australian Conti-nent-for any of these conceptions or
beliefs my sole warrant lies in corresponding facts of my own consciousness. The Universe, past, present, and to come, rolls into my ken only through my mind. On this ground of Consciousness then, as the repository, storehouse, or conventicle of all knowledge, all philosophers take their stand-even those who end by explaining Consciousness itself as a temporary result or peculiarly exquisite juncture of the conditions which it employs itself in recalling and unraveling. So far there is no clifference among philosophers, no division into schoals. Should any one attempt to set up as a philosopher on any other ground, it could only be because he did not understand the use of terms.
6. "But let us advance a step. What
7. The last paragraph quoted conducts us forward to the third variety of the Cosmological conception named above as The Elaborate, The True Cosmical, or The Ornate. With the discovery of the Philosopher, that his first Rational Perception is not to be trusted implicitly, and that his very Senses deceive him, Philosophical Skepticism ensues, and he enters upon his long and weary task of answering satisfactorily the question: What is truth? Since Socrates, the Philosophic World has had no rest from this inquiry. When the whole subject is reconsidered, or radically studied, in this deep Speculative way, the Thinker arrives at his Cosmological Conception, which is the third variety in question. At this late day, and in the highest spheres of thought, the second form subsumes much of the character of the first in the composition of the third. Ferrier, for example, repugns the merely Rational Mind, as being no more the Man himself than is his material body, and falls back upon the Ego, in the Actuality of its Experiences, which, while in a sense the most remote from, is, in another sense, not unlike the Instinctual Conception. The
is the ORIGIN of all those multitudinous ideas, notions, or informations which flutter through our Consciousness which rise there, at our bidding or without our bidding, in all sorts of combinations, and out of which we construct our knowledge or beliefs as to what has been, or is, or is to be? Whence come the ideas into our minds that we find there, and that constitute our intellectual stock? Is any portion of our knowledge of a different origin from the rest, and of a different degree of validity in consequence of that different origin? On this question there has been a polar antagonism among philosophers since there were philosophers in the world. In nothing have philosophers, in nothing have men at large, differed so essentially as in the answers they have given, knowingly or implicitly, to this question. Here is that
difference of Psychological Theory wherein, as I have said, we must look for the first split among philosophers, and the explanation of further discrepancies. The history of Philosophy hitherto has been mainly a struggle, varying in form from age to age, but not in substance, between two radically opposed Psychological Theories.
8. "According to one school or series of philosophers, hitherto, all our knowledge, all our notions, all our beliefs, are derived solely from Experience. There is a streaming into our minds, through the senses, of multiform impressions from the external world, which are combined within the mind by laws of association, and are discriminated, classified, analyzed, re-collected, grouped, and what not, till they form the entire miscellany of our facts, cognitions, and habits, and

# following Table presents here again the Parallel of the related Domains of Philosophy and Science. 

TABLE 21.

1. Cosmical Conception $(1.0) 1^{\text {st }}$.
2. Teme Elaborate, True Cosmical, or Ornate (1.0) 3.
3. Teme Dialectical (1.0) 2.-c. 1.
4. Tuie Instinctual (1.0) 1.
5. Sciento-Cosmology (1.2) $1^{\text {st }}$. Concretology, Corporology (3.). Abstractology (2.). Abstract-Concretology (1.).

Of these three varieties of the Cosmological Conception, the third shall first be pursued into some of its subdivisions. The more important are 1. Realisar ; 2. Constructive Idealism;

Commentary t. 35̌S. 1. The Dialectic here is between Matter and Mind, furnishing the Natural Dualism of the Popular Mind. Ais Dialectic it goes back, howerer, to the Primitive Something and Nothing; and thence to The Whole and The Parts; and so, in fine, to Unism and Duism.
even our highest principles, propositions, axioms, and generalizations. All that is in Man-all that he calls Truth (let it be eren mathematical truth, or his highest notions of right and wrong, or any ideas he may have of beauty, or nobleness, or even Deity)-is but a deposit or induction from the circumstances in which Man is placed. Had these conditions been different, the deposit would have been different. All truth, therefore, is contingent or historically arrived at. There is no such thing as innate or $a$ priori truth, or direction to truth ; and any higher certainty that some truths may possess over others, is but the consequence of a wider, more perfect, and more frequently repeated induction. Such, more or less clearly recognized, arowed, and argued from, has been the theore of one school or series of thinkers since Philosophy began. It is usually called the Empirical theory, or the
theory of Sensationalism. The former name (though it unfortunately has reproachful associations) is only intended to imply what the philosophers in question avow, when they say that they own no other origin of our knowledge than Experience; and the latter name only expresses what has also been admitted by the most thorough of those philoso-phers-to wit, that the assertion that all our knowledge originates in experience is tantamount to the assertion that it all comes into the mind through the channels of the senses. 'Nihil est intellectu quod non prius fuerit in sensu' ('Nothing is in the intellect which has not before been in the senses'), is the formula of this class of philosophers, propounded by some of themselves, and adopted by others in describing them. Another of their phrases is that the mind is to be conceived as originally a tabula rasa, or white paper, containing
3. Pure Idealism. These are the Philosophical Analogues
of 1. Tellurology; 2. Meteorology ; and 3. Uranology Tab. 15, t. 278), respectively; or jointly of Classiology, thus:

## TABLE $2 \mathfrak{2}$.

(Pmmosophical). The Elaborate Cosmical Conception (1.0) 3.

1. Realism (1.0)3) 1.
(Echosophical). Concretology (3.).

# 3. Pure Idealisa (1.0)3) 3. <br> 2. Constructive Idealism (1.0)3) 2. 

359. Tellurology answers, here, to Realism, and is collectively a branch of Classiology, representing the Earth or
no characters whatever, but receiving whatever is inscribed upon it wholly from without.*
360. "To this view, however, there has been, on the part of other philosophers, a continued opposition. There have always been philosophers who maintained that there is another source of our knowledge than Experience or Sense -that there are Notions, Principles, or Elements in our Minds which could never have been fabricated out of any amount of Experiences, tut must have been bedded in the very structure of the mind itself. These are necessary Beliefs, $a$ priori Notions, innate Ideas, Constitutional Forms of Thought, Truths which woe cannot but think.
361. "There have been various forms of this doctrine, some of them confused and mystical enough. But amid all the diversities there is recognisable a com-
mon Psychological Theory, contradictory of that of Sensationalism. It is known as the theory of a priori ideas, necessary beliefs, or, latterly, as the theory of Intuitionailism or Transcendentaiism. By this last name is implied the supposition that there are elements of knowledge the origin or reason of which transcena's, or lies beyond the horizon of historical conditions." (1).

## III. The Ontological Faitir.

9. "Mind or Consciousness, whatever it may be, is that Organism[us] in the midst of all things, through which allour Knowledge of all things must come. Philosophers, therefore, may make a study of that; and they have done so under the name of Psychology. Round this Organism[us], however related to it , is the vast and varied Cosmos, or phenomenal and historical Universe,
[^55]Ground as contrasted with the Superior Cosmical Strata. But, this same Ground reappears distributively as the Mineral, Vegetable, and Animal, "Kin̂gdoms. In this regard it is Regnology, a lower division of Concretology, than Classiology, entire. Regnology then corresponds to 1. Materialism, which re-echoes to The Mineral World in the Scientific Domain, as the Ground or Gross Solid Substratum of Conception; 2. Natural Realism, allied with The Dialectical Cosmological Conception, or Natural Dualism (Tab. 21, t. 358). This echoes to the Tree and the Vegetable World; growing upward to the Light, the Spiritual Tendency, and downward, by its roots, to the Earth, the Material Tendency or Half of the Conception.
which the Organism[us] reports to us as hung in Space, and voyaging through Time. Philosophers may make a study of that; and such a study would be Cosmology. But, beyond this whole phenomenal Universe or Cosmos, which has the Mind of Man in its midst, it has been the passion of Philosophy to assert or speculate a Transcendént Universe, or Empyrean of Things in themselves, of Essential Causes, of Absolute or Noumenal, as distinct from Phenomenal Existence. What enspheres the Cosmos, what supports it, of what absolute reality underneath and beyond itself is it significant, of what Absolute Meaning is it the expression, the allegory, the poem?
10. "May not the entire Phenomenal Cosmos, hung in Space, and voyaging through Time, be but an illusion-and this, whether we consider it to be, within itself, a play of Matter alone, or of Spirit alone, or of both Matter and Spirit? If we feel that it is not, on what warrant do we so feel? In what tissues of facts and events, material or moral, in this Phenomenal Space-and-Time World shall we trace the likeliest filaments of that golden cord by which we then suppose it attached to a World not of Space and

Time; and how shall we, denizens of Space and Time, succeed in throwing the end of the cord beyond our Space-andTime World's limits? Is the Cosmos a bubble? Then, what breath has blown it, and into what Empyrean will it remelt when the separating film bursts? Asking these questions in all varieties of forms, Philosophy has debated the possibility of an Ontology, or Science of Things in themselves, in addition to Psychology and Cosmology. These two are sciences of the Phenomenal [The Relative], but that would be a Science of The Absolute. It would be the highest [the lowest] Metaphysic of All; and indeed, in one sense, the only science properly answering to that name. It would be the Science of The Supernatural. Can there be such a science? A question this which seems to break itself into two-Is there a Supernatural? and, Can the Supernatural be known? It is the differences that have shown themselves among philosophers in their answers, expressed or implied, to these questions, that I have in view under the name of their differences in respect to Ontological Faith." (1). (t. 346).

[^56]3. Vital Realism or Trinal Realism, which considers Matter and Mind as equally void factors of the Cosmos apart from a third which is the Observing Ege or the Me. This is the Cosmical conception of Ferrier jast noticed ( $\mathbf{t}$. 358; Table 20, t. 355). The following Table completes this view :

## TABLE 23.

(Philosophical) Realism (1.0)3)1. (Echosophical) Regnology (3.) 1. 3. Vital Realisy (1.0)3)1) 3 rid Antralogy (3.) 1) 3 rd.
2. Natural Realism (Dual) (1.0)3) 1) $2^{\text {dad. }}$. Vegetalogy (3.) 1) $2^{\text {nd }}$.

1. Materlalism (1.0) 3) 1) $1^{\text {st }}$. Mineralogy (3.) 1) $1^{\text {st. }}$.
2. Constructive Idealism (1.0)3)2 echoes to Meteorology, which repeats Vegetalogy as (3.) 2) $2^{\text {nd }}$, must repeat (3.) 1) $2^{\text {nd }}$. The "vicarious assurances, representations, or nuntii of real unknown objects," (a. 4, t. 366) intervening between the Real Outer and Lower World and the Interior and Higher Mind of the Observer, echo, in the Domain of Philosophy, to the Region of Mid-air, between Earth and Hearen, and to the "Signs and wonders," of which that region is the arena of display; and hence to Meteors and their attendant Phenomena, the Subject-matter of the Science of The Weather, in the External or Objective Domain.
3. Pure Idealism echoes, in this sense, to Uranology. It is the Universe looked down upon from the heights of Heaven. It is the World of Matter projected from the World of Mind; the World of Matter as a World of Ultimates or outroard Results, or Effects, from a Spiritual Subjectire World, which is a World of Causes. This Spiritual World is predominantly Heaven, and Pivotally or Centrally within Heaven, and yet, in a sense, himself the whole of Heaven, is the Lord God, from whom, therefore, all things are. Such is, at least, the Cosmological Conception of Swedenborg, the most elaborate by far of the Pure Idealists. The Material World, he adds, repeats
or corresponds to the Spiritual World as an Effect to its Cause. Tulk, following out more logically, and somewhat less mystically, the Principle of Swedenborg, affirms very intelligibly the Unity of Law, hence resulting; , between the two Worlds, and by consequence, throughout the Universe. This is also meant by "The Universal Unity" of Fourier.
4. But Consciousness or The Conscious Ego, says Ferrier, is The Man, triumphing over both Matter and Mind. This is virtually ascending from the Heaven of Mind above the Earth of Matter and the Meteoric region of "Representations" between them, to the God within the Heaven. Ferrier makes, indeed, of this Individual Consciousness, a real God, first Self-Creative, and then Governing over the Natural Manifestations of Mind, as well as over the Outward World of Matter. The striking and'pregnant position of this earnest and astute philosopher, upon this point, is well put in the following extract ; (Read, for Consciousness, Self-Consciousness) :
5. "It is here objected that unless these states of mind existed, Consciousness would never come into operation, and that, therefore, it falls to be considered as dependent upon them? In this objection the premises are perfectly true, but the inference is altogether false. It is true that man's Consciousness would not develop itself, unless certain varieties of sensation, reason, etc., became manifest within him ; but it does not by any means follow from this that Consciousness is the natural sequent or harmonious accompaniment of these. The fact is, that Consciousness does not come into operation in consequence of these states, but in spite of them; it does not come into play to increase and foster these states, but only actively to suspend, control, or put a stop to them.
6. "This, then, is the reason why Consciousness cannot develop itself without their previous manifestation; viz., because, unless they existed, there would be nothing for it to combat, to weaken, or to destroy. Its occupation or office would be gone. There would be nothing for it to exert itself
against. Its antagonistic force, not having been given, there would be no occasion for its existence. This force (the power existing at what we call the mental pole), does not create Consciousness, but as soon as this force comes into play, Consciousness creates itself, and, by creating itself, suspends or diminishes the energy existing at that pole. This fact, showing that Cousciousness is in nothing passive, but is ab origine essentially active, places us upon the strongest position, which, as philosophers fighting for human freedom, we can possibly occupy; and, it is only by the maintenance of this position that man's liberty can ever be philosophically vindicated and made good. In truth, possessing this fact, we hold in our hands the profoundest truth in all Psychology, the most awful and sublime truth connected with the nature of man." (1).
7. But now comes James, also expounding Swedenborg, and avers that the only Absolute Conscious Ego is God; that the merely Individual Human Consciousness is not in any sense original; that it is purely phenomenal and derived; that it is created by The Absolute, or emanates from God, and is, in itself, absolutely Nothing. It is made to appear to itself as Something; as, indeed, self-existent and free in a sense which founds a moral responsibility, but that in very truth God is "All in All." He gives a seeming Self-hood to the creature, where, in fact, a real Self-hood is impossible. Time and Space are the constitutional conditions of this Individual and Dramatic Consciousness, but have no existence for the Absolute Consciousness. (2). This is the acme of Pure Idealism, and here we must stop for the present. This is the highest domain of Speculology, and may occupy our attention most specially, at some other time.
8. An excellent condensed account of these several varieties of the Cosmical Conception of Philosophers (Table 22,
(1) Ferrier's Greek Philosophy and Remains, Vol. II., p. 79.
(2) Substance and Shadow, passim, and other Works, by Henry James.
t. 358, and Table 23, t. 359), except Vital Realism, is given by Masson, as epitomized and arranged by him from Sir William Hamilton. With these he includes Nihilism, and Pantheism or Absolute Identity, to which we will in the next place give our attention. This account of these (six) Cosmological Conceptions by this writer I have extracted and thrown into the Annotation, to which for further elucidation the reader is referred. a. 1-7.
9. We arrive now at a very important point in this investigation. It will have been observed that all the Clefs denoting the Distribution of Philosophy (Naturo-Metaphysic) have always, prefixed to them, the Pre-clef (1.0), while, in respect to Echosophy, (Science), the (1.2), which answers in a general sense to the (1.0), breaks up into its own constituents, as (1.), (2.), (3.), for the first subdivisions, and that hence the (1.2) is not requisite as a prefix to them. All of this has a deep significance. The Sub-clefs under (1.0), as (1.0) $1^{\text {st }}$, for instance, correspond, with the Lowest basis of.Echosophic Distribution; but Metaphysical Analysis sinkis the Shaft of Investigation to a lower level than any which is distinctively known in Objective Science; (-although instinct-

Annotation t. 366. 1. "There is the system of Nihilism, or, as it may be better called, Non-Substantialism. According to this system, the Phenomenal Cosmos, whether regarded as consisting of two parallel successions of phenomena (Mind and Matter), or of only one (Mind or Matter), resolves itself, on analysis, into an absolute Ngthingness, - mere appearances with no credible substratum of Reality; a play of phantasms in a void. If there have been no positive or dogmatic Nihilists, yet both Hume for one purpose, and Fichte for another, have propounded Nihilism as the ultimate issue of all reasoning that does not start with some a priori postulate.
2. "There is the Srstem of Materialism, or Materialistic Realism. According to this system, a certain sum-total of real existence is assumed as underlying the conscious succession of ideas, but the seeming dualism or co-ordinate independence of two worlds, one of Mind, and the other of Matter, is got rid of by supposing Matter to be the primordial unitr, and Mind to be, or to have been, educed from it. There have been arowed Materialists among Plilosophers, of whom Hobbes is an early English example. But many have been called Materialists, who have really not been such; nor, if we consider the contradictory varieties of thought which may exist within one
ively there is an echo from this deeper deep, within the Scientific Domain) ; and it is into this lower department of the subject, that we are now to re-enter, for we were already there when we previously discriminated the Primitive Something from the Primitive Nothing. ( t . 115).
368. We re-enter this domain, now, by analyzing the Metaphysical Pre-clef (1.0), or, in Logical Order (0.1), into the Parts of its own Constitution. The zero (0.) denotes the Indeterminate Nothing, whence ( $\sim$ ) 0 may be chosen as the Clef for that one of the two Additional Cosmological Conceptions, which is known as NiHilism (a.1, t. 366), from the Latin Nihit or Nil, Nothing. The Clef $(\sim) 1$, will then denote the remaining and exactly opposite one, called Pantheism, or, more strictly, Absolute Identity (a. 7, t. 366). It is of these two conceptions that Masson says, when introducing them: "That they bring considerations into the classification, he thinks, which are not exclusively Cosmological." We shall see presently how this is so.
369. Of these two Exceptional Cosmological Conceptions, this writer elsewhere gives us the following explicit account.
apparent drift of speculation, ought the name, while odium attaches to it, ever to be applied to any one without his own permission.
3. "There is the System of Natural Realism, or Natural Dualism. According to this system, while Mind or Spirit is regarded as an undoubtedly real essence, or substance, or energy of one origin or nature, the extended Material World in the midst of which this Mind or Spirit seems to find itself, and with which it seems to have commerce, is also assumed as a distinct reality, and not as a distinct reality of some highly removed sort, acting upon us illusively through mediate signs and impulses, but as actually very much that solid and substantial world which we get at through our senses. There have been varieties, how-
ever, cruder and finer, of this Natural Realism. What do mankind in general believe? They believe that the material world is exactly and in every respect the world which our senses report to us as external to ourselves. They believe that the rocks, the hills, the trees, the stars, that we all see, are not mere hieroglyplics of a something different from themselves and from us, but are really what is there. That outer vastness of space in which orbs are shining and wheeling is no mere representation or visionary allegory of something; it is the thing itself. This is, and always has been, the popular belief of mankind in general. All mankind may, therefore, be described, generally, as Natural Realists. But, strange to say, Natural Realism has been the system of but one or two modern
"There has been a drift leftwards, through Materialism or Materialistic Realism, towards Nihilism, or the Conception of an ultimate Nothingness, or, if the expression is preferred, the resolute Non-Conception of any ultimate anything. There has similarly been a drift rightwards, through more and more refined varieties of Idealism, towards the notion of Absolute Identity, or an eternal real Oneness of Subject and Object, of which all the vast cosmical periodicities from Nebula to Nebula, or whatever may be the terms, are to be conceived as living pulsations." (1).
370. But, as between the Something and the Nothing there arises the idea of Limit. (t. 120). It was here that Hegel fixed his attention, and from this view of the inmost constitution of Being he elaborates still another Cosmical Conception. This is brilliantly introduced and characterized by Masson as follows. Referring to this divergency on the right and left to Nihilism and Absolute Identity, respectively, he says: "Well, was anything more to be done? It seems difficult to conceive that anything remained to be done. One might run backwards and forwards among the six schemes, (a. 354), returning
philosophers-among whom Reid is named as a type. Nay, more, among these philosophers it is not the popular form of the belief that is entertained. Mankind in general suppose sweetness, shrillness, color, etc., to be qualities inherently belonging to the objects to which they are attributed, while the philosophers who are Natural Realists admit that at least these so-called 'secondary quaitities' of objects have no proper outness, but are only physiological affections-affections of the organs of taste, hearing, sight, etc., produced by particular objects. Thus the Natural Realism of philosophers is itself a considerable remove from the Natural Realism of the crude popular belief. It does
not, with the crude popular belief, call the whole apparent external world of sights, sounds, tastes, touch, and odors, the real world that would be there whether man were there or not; but it descries in that apparent world a block or core, if I may so say, which would have to be thought of as really existing, even if there were swept away all that consists in our rich physiological interactions with it.
4. "There is the system of Constructice Idealism. It may be so called to distinguish it from the more developed and extreme Idealism presently to be spoken of. According to this system, we do not perceive the real external world imme. diately, but only mediately-that is, the
from Nihilism or from Absolute Identity centrewards: but, either to leap off Nihilism on the one hand, or to leap off $A b$ solute Identity on the other, was a feat apparently beyond all rational gymnastic. Well, but what if the two extremes could be united? What if a logical bridge could be thrown at once from Nihilism to Absolute Identity, overspanning all the intermediate systems? What if the mind could be hung as a pendulum, necessarily taking the exact arc from Nihilism to Absolute Being in its easy swing, so that one swing of it, one single act oi thought, should actually receive, apprehend, nay, repeat and represent, that vast cosmical beat of Periodicity, from Nothing to completed Being, and from completed Being back to Nothing again ?
371. "At such a suggestion we Britons naturally feel uneasy. We would rather not have our minds swung so! 'For any sake, don't,' we cry ; 'we haven't been accustomed to it,
objects which we take as the things actually perceived are not the real objects at all. but only vicarious assurances, representatives or nuntii of real unlinown objects. The hills, the rocks, the trees, the stars, all the choir of heaven and earth, are not, in any of their qualities, primary, secondary, or whatever we choose to call them, the actucl existences out of us, but only the addresses of a 'Something' to our physiology, or eductions by our physiology out of a 'Something.' They are all Thoughts or Ideas, with only this peculiarity involved in thera, that they will not rest in themselves, but compel a reference to objects out of self, with which, by some arrangement or other, they stand in relation.
5. "Difficult as this system may be to understand, and violently as it wrenches the popular common sense, it is yet the system into which the great majority of philosophers in all ages and coun. tries hitherto are seen, more or less dis-
tinctly, to have been carried by their speculations. While the Natural Realists among philosophers have been very few, and even these have been Realists in a sense unintelligible to the popular mind, quite a host of philosophers have been Constructive Idealists. These might be farther subdivided according to particular variations in the form of their Idealism. Thus, there have been many Constructive Idealists who have regarded the objects rising to the mind in external perception, and taken to be representative of real unknown objects, as something more than modifications of the mind itself-as having their origin without. Among these have been reckoned Malebranche, Berkeley, Clarke, Sir Isaac Newton, Tucker, and possibly Locke. But there have been other Constructive Idealists, who have supposed the objects rising in the mind in external perception to be only modifications of the mind itself, but yet, by some

Absolute Oneness, if you please, or Nihilism, if you please ; we should not so much mind which ; but who can live on a shuttle between them? Yet this is precisely what he whom his admirers regard as the last of the world's great metaphysicians, tells us we must do, and, indeed, are doing every moment, whether we know it or not. And who is .he? Hegel, the terrible Hegel, the brain-benumbing Hegel-on scraps of whose doctrines modern Germany is said to have been living for forty years, but whose entire system no German soul, even, is believed to have yet fathomed or got round ; who himself said, after his system had been before the world for a sufficient time, and hundreds had been doing their best with it, 'There is only one man living that understands me, and he doesn't.' What Hegel gave to the world, as principally wanted, and as the foundation for all else, was a new Logic, or Science of the
arrangement, vicarious of real unknown objects, and intimating their existence. Among such have been reckoned Descartes, Leibnitz, Condillac, Kant, and most Platonists. The general name 'Idealists,' it will be seen, properly enough includes both the classes as distinct from the Natural Realists, inasmuch as both classes hold that what the mind is directly cognizant of in external perception is only ideas. But, inasmuch as these ideas are held by both classes, though under divers hypotheses, to refer to real existences beyond themselves, and distinct from the perceiving mind, the thinkers in question may also properly enough be called Realists or Dualists, though not 'Natural' Realists or Dualists. They occupy a midway place between the Natural Realists and the Philosophers next to be mentioned.
6. "There is the system of Pure Idealism, which abolishes Matter as a distinct or independent existence in any sense,
and resolves it completely into Mind. Though this system is named in the scheme, for the sake of symmetry, and as the exact antithesis to Materialism, it is difficult to cite representatives that could be certainly discriminated from the merely Constructive Idealists just mentioned on the one hand, and from the School of Philosophers next following on the other. Fichte is, perhaps, the purest example. [Swedenborg, Tulk].
7. "There is the system of Absolute Identity. According to this system, Mind and Matter are phenomenal modifications of one common Substance. The whole Cosmos, both of Matter and of Mind, is referred to a one Absolute Entity, of which it is to be conceived as but the function, activity, manifestation, or forth-rushing. This system, it will be noted, is at the opposite extreme from Nihilism. It is the system of Spinoza, and also, though with a difference, of Schelling. (1).
(1) Recent Eritish Philosophy, pp. 61-67.
necessary laws of Thought ; and in this Logic the foundationprinciple was the identity, the inseparability, in thought, of the idea of Being and the idea of Nothing. The most abstract thought of man, that in which he ends by the most intense effort of reason, is the idea of pure Being ; and in every way, this idea is the same as the idea of pure Nothing; and each merges into the other necessarily ; and both are forms of one combining idea, the idea of Becoming. (a. 31, t. 204; t. 385). And this alternation between the idea of ATothing and the idea of Being, through the idea of Becoming, is the law of every thought that man thinks or can think. Every thought is a poise, a beat, a pulsation, between the two contradictions, comprising them both in one organic act as inseparable, though distinguishable. And this law of Thought is also the law of Being ; and Logic, which is the science of Thought, is also the science of Being. Logic and Metaphysic are identical. What takes place in erery thought, also takes place in every fact. 'Nowhere in Heaven or in Earth is there anything that contains not both these-Being and Nothing.' And, on the largest scale, with respect even to the vast cosmical periodicity itself, the entire rounded object of the cosmological conception, the same, according to Hegel, if I understand him, is the desired explanation. The Universe is a thought, a beat, a pulse, of the Absolute Mind. The apprehension of the logical law of this thought constitutes our Metaphysic, and again this Metaphysic re-appears as the Logic of our own minds, and of each of their minutest acts. In the minutest act of our minds is the same Secret-Logical, Physical, Metaphysical-as in the entire Universe!
372. "Of course, we by no means see the Complete Hegel in this speculation, even if it has been rightly stated. It is only the most abstract form of that one special principle, the leaven of which threw German Philosophy, as received by Hegel from Kant, through Fichte and Schelling, into a new universal ferment. Hegel had his philosophy of Nature, his philosophy of

History, his philosophy of Art, his Politics, etc., in addition to his Logic, but declared to be in consistence with it. He had also his Theology, which he discriminated from the Pantheism of the mere Identity-System as it had remained in Schelling's hands. By the new Hegelian law of the pendulum-movement of the mind between Nothing and Being, it was not Pantheism, but a theology much more at one with the common theology, that was necessitated. And, in point of fact, most of the recent religious developments of Germany, orthodox and heterodox, Catholic and Protestant, Straussian and Anti-Straussian, refer themselves to Hegelianism. A tincture of Hegel has also appeared, with various effects, in the most recent speculative literature of France. It is, I think, a later influence in the French mind than that of Cousin, or that of Comte. I trace it in the writings of Proudhon, if not in those of Renan." (1). Mr. Masson concludes by a notice of a recent work in England, by Mr. James Hutchinson Sterling, entitled: The Secret of Hegel; being the Hegelian System in its Origin, Principle, Form, and Matter.
373. For this Cosmological Conception of Hegel, planted on the Limit and the Interlocking between Nihilism (Nothing) and Absolute Identity (the Pure Something, or the Absolute One, or $1=$ All), the Special Universological Clef $\mathbf{1}=\mathbf{0}$ may be adopted ; (or in the Logical Order 0=1). His own precise formula for this basic idea of his system is, as we have seen, the precise equivalent of this, namely Something = Nothing. (t. 120). As a technicality this Conception may be denominated Tife Absolute Dialectic. The first Subdivisions of Hegel's System of Philosophy arising out of this conception are then indicated as follows. The further Subdivisions the student can readily extend at his leisure. (2).

[^57]$\left.\begin{array}{ll}\operatorname{Mind} & (1=0) 3-\left(=M_{a n}\right) . \\ \operatorname{Logic} & (1=0) 2-(=\operatorname{Science}) .\end{array}\right\}$ t. 10, 11.
374. Through the Vibratory character of the Limitary Conception, that of Hegel's Equation between the Something and the Nothing, we are carried over into a double connection with Domains beyond the Sphere of Naturo-Metaphysic, which we have now been engaged in investigating since the introduction of Table 18 (t. 347). We are first led into connection with the Second branch of Cosmical Conception, The Dialectical (1.0) 2, Table 22, (t. 358). It was the Elaborate or Ornate (1.0) 3 , which we have been considering. We are, in the next place, led into connection with Scievto-Philosophy having the Clef 1.1, and also having an Antithetical and Dialectic character of its owon sort. Let us, for the present, consider The Dialectical Fory of the Cosmical Conception (Tab. 22, t. 358) ; and first let us determine, more precisely, the meaning of the term Dialectical.
375. We recur to $1 ; 0$ in the sense in which, in accordance with what has been said (t. 115), this Clef denotes the Primitive Something and Nothing (The Positive and Negative Principles of Being). Hence it relates to the Dialectic-the change from side to side, the walk or waddle-of Development, throughout the entire Universe.
376. The portion of the basis of the Doctrine of Hegel which he derived from Fichte consisted of the doctrine called Thesis, Antithesis and Synthesis. These, applied to the Sonething, the Nothing, and Existence thence derived, are as follows: The Something is Thesis, from the Greek tithemi, I PUT ; that which is first put or laid down ; that, at least, to which the attention is primarily directed. The Nothing is then the Anti-thesis (ATII, opposite, COUNTER, OVER-
against) ; that which is contrasted with the Thesis, and which counterparts, while it opposes it. The Synthesis (syn or sun, together, with,) is then the Composity or united resultant of the former two, -the Thesis and the Antithesis. This is given as the Norm or Pattern of the Constitution of Being -universally, as also of the Order of Development.

37\%. There is in this doctrine a crude and limited apprehension of the riper doctrine of Unism, Duism, and Trinism (t. 126) ; but disconnected with the Orderly Series of Number it proved a barren, non-developing idea, interesting as a speculation of Philosophy, but virtually useless as a working Principle of Science. Still, as a branch or special aspect of the Omnipresence of Unism, Duism, and Trinism, it deserves to be clarified, elucidated, defined, and enlarged.
378. Observe, in the first place, that what is taken as Antithesis in any Conjuncture of the Aspects of Being, may, in turn, be treated as Thesis, in which case the previous Thesis assumes the position of Antithesis. This is a shifting merely from the Natural to the Logical Order,-a Terminal Conversion into Opposites, in this respect. For instance, if we take the Globe, or all Globes, (Matter) as the Something, and hence as Thesis, and vacant Space as the Nothing, and hence as Antithesis, we proceed in an order of Thought which makes Matter primitive, and the Containing Space secondary and accessory. Let us represent this conception by the Clef $1 ; \mathbf{0}$. But we may proceed in the counter-order. We may well conceive and insist that Space, as a place in which to be, must be prior to Matter, as the thing which is within the Space. This is, indeed, the Logical necessity, while in Nature it is true that Space falls into the secondary or more unimportant position. Put for the Logical Order the Inverse Clef 0;1. The mere Negative Realm of Space is the Domain, par excellence, of the Cut-up of Science, especially of Mathematical Thinking. The Two Orders here involve, therefore, by analogy, the whole question of precedence, as between Nature and Science (t. G; 11),
between Arbitrism and Logicism (a. 6, c. 32, t. 136; t. 357), and between scores of analogous antithetical pairs of the Aspects or Principles of Being.
379. Observe, in the next place, that the use here made of these terms, Thesis, Antithesis, and Synthesis, in accordance with the usage of the metaphysicians, is inaccurate and confusing. An Additional Discrimination is wanted. They are applied, as terms, to the Aspects treated as Objects of which Existence is composed,-including Existence itself, as completing the scale. For instance, if the Left Side-Half of the Body be taken as Thesis, the Right Side-Half is then the Antithesis, and the Wholeness of the Body, as composed of these two, is the Synthesis. But, Antithesis and Synthesis are also used, non-technically, and far more frequently and correctly, for two aspects of the Intervening Relation between the two given Entical Aspects or Objects. The Antithesis between the two Side-Halves of the Body, in this sense, is their Stand-ing-asuinder (Polar Antagonism, t. 125-real or in idea), and their Synthesis is their Recombining or Putting-together subsequently (in seeming) to their Analysis, (which Puttingtogether, as it is really a perpetual Phenomenon, in regard to the Prime Elements of Being, is The Inexpugnability of Prime Elements, t. 126). To these expressions I have added Synstasis for the state prior to Analysis. (Tab. 12, t. 211).
380. Let us reserve, therefore, this trio of Terms-Synstasis, Analysis, Synthesis-for these essential discriminations of the Interior Constitution of the Intervening Relation itself. We require, then, to reconstitute the other Trio, which we are to employ in the meaning of the Metaphysicians, that is to say, for the two Termini, (Ends, or Sides, or Side-Halves,) between which the Relation occurs,-plus their Totality as a Third term. For these let us say Thet or Thesis for the First ("Thesis") ; Antithet for the Second ("Antithesis"-the Opposite End or Side, whether Aspect, Principle, or Object); and Synthet for the Third ("Synthesis")-the Resultant

Composity or Wholeness. The following Diagram will sufflciently illustrate these two sets of discrimination. c. 1-3.

381. It is this which I have denominated The Dialectical Cosmical Conception, and which echoes, in Philosophy, to Abstractology, in Science (Tab. 21, t. 358. It accorảs with, and repeats, the Natural Dualism, or Natural Realism (1.0)2.

Commentary t. 380. 1. I can best illustrate the cfiort to apply the old philosophical discrimination of this kind within domains of Positive Science, by quoting from Coleridge. His tables are inverted to agree with my plan. I add in brackets my own modification of his terms.

## 1. Parts of Speech-Grammar.

2. "There are seven parts of speech, and they agree with the five grand and universal divisions into which all things finite, by which I mean to exclude the idea of God, will be found to fall; that is, as you will often see it stated in my writings, especially in the Aids to Reflection (p. 170, 2nd Ed.).

Synthesis [Synthet.] 5.
Thesis [Thet.] 2. Mesothesis [Mesothet.] 4. Antithesis [-thet.] 3. Prothesis [Prothet.] 1.
of Masson, in the general fact of its bifurcate or dual character; but must not be confounded with it, as that is the Analogue of the Vegetable Kingdom or the Tree (t. 359). It is in respect to Dialectic generally that we need to erect into Formulas of Universology the two opposite descriptive expressions

## Antithetical Reflection, and Balanced Vibration.

382. This relation of Antithesis, or of Antithetical ReFlection, as of a man viewing himself in a glass, and of Balance coupled with Movement or Reciprocal Interchange of the point of view, may occur as between the two Worlds of Matter and Mind ; as between the Conscious Ego, as Subject, and those two Worlds conjointly, as Object; as between Cause and Effect in a Series or Order of Events, or as between any Couple of Partner-elements or Principles, stand-

Conceive it thus: 1. Prothesis, the Noun-Verb, or Verb-Substantive, $I$ am which is the previous form, and implies identity of being and act. 2. Thesis, the Noun; 3. Antithesis, the Verb. Note:-each of these may be converted; that is, they are only opposed to each other. 4. Mesnthesis, the Infinitive Mood, or the indifference of the Verb and the Noun, it being either the one or the other, or both at the same time, in different relations. 5. Synthesis, the Participle, or the Community of the Verb and Noun,-being and acting at once. Now modify the Noun by the Verb, that is, by an act, and you hare, 6. The Adnoun or Adjective. Modify the Verb by the Noun, that is by being, and you have, 7. The Adverb. (1).

> 2. Theology.
3. "In the Trinity there is, 1. Ipseity; 2. Alterity ; 3. Community. You may express the Formula thus:

The Spirit = Synthesis [Synthet.]
The Father $=$ Thesis [Thet.] $\quad$ The Son $=$ Antithesis [Antithet.]
God, the Absolute Will or Identity Prothesis" [Prothet. (2).
I would suggest here, for the better carrying out of his own idea, this alteration: The Spirit = Mesothesis, and the Triune Godhead = Synthesis [Mesothet and Synthet]. All Aspects are Pantothet. See Diagram in the Text.
ing or moving side-by-side of each other ; between, in fine, Analysis and Synthesis themselves as Thet and Antithet within the Interior Constitution of a Relation, even ; and, hence, especially, between the primitive Something and Nothing as constituents of the very conception of Being.
383. The mere Static Conception of the Oppositeness of these two factors, the Something and the Nothing, is expressed by the Hegelian Equation between them. This is the basis. But it is when the idea of Vibratory Movement is added that the meaning embraced in the term Dialectic is completed. The two conceptions are, therefore, naturally affiliated, and both are centered in the Hegelian Philosophy. Both are themselves centered, in turn, upon the Idea of the Limit between Thet and Antithet ; and the Positive consideration of Limits founds the Abstract Sciences, or the Abstractology of Echosophy. This, therefore, is the nearest approximation of Naturo-Metaphysic to the Objective Sciences of Logic and the Mathematics. (Tab. 14, t. 247).
384. When the Antithesis and Balanced Vibration are between that which precedes and that which follows, in Time or Succession, as between Cause and Effect, for example, we have the Philosophy of The Becoming (a. 31, t. 204). This, "if it be a transition from Nothing to Being, we call an Arising, or, in the reverse case, we call it a Departing. The still and simple Precipitate of this process of Arising and Departing, is Existence" (Ger. Daseyn). (1).
385. This Becoming is the Analogue, in Philosophy of Logic in Science-meaning Catalogic, the Logic of Sequences, Co-Sequenciation, or Con-Sequenciation-the Science and Art of Reasoning. (t. 371).
386. When the Antithesis and Balanced Vibration are between things collateral, or standing side-by-side of each other, we have the Dialectic proper, that of Stationary Being, or of

Being at rest in Space. This is the Analogue, in Philosophy, of Analogic, in Science, which is, par excellence, the Science of Col-lateration, or of Co-existences. (c. 4-9, t. 32I).
387. Finally, when the relation of Antithesis and Vibration is that of Real Existences, or their Numerical Abstracts (the Units of Number), as, Correlated in Space-the Groups or Sums of Units ( $\mathbf{t}$. 115)-AND, in Time-the number of Times or Repetitions in which each group is to be taken-we have another, and compound species of Dialectic, which is the Analogue in Philosophy of the Mathematics in Science. This may be denominated the Existential Dialectic. The following Table exhibits these important relationships of Analogy:

$$
\text { IAB工W } 25
$$

| 3. Existential Dialectic (1.0)2.) 3. | Mathematics (2.) 3. |
| :--- | :--- | :--- | :--- |
| 2. Dialectic Proper $(1.0) 2) 2.$. Analogic (2.) 2. <br> 1. Phmosophy of "The    <br> Becoming" $(1.0) 2) 1.$. Logic (2.) 1. |  |

388. The Existential Dialectic then subdivides, to accord with the First Threefold Distribution of Mathematics into 1. Arithmetic ; 2. Geonetry ; and 3. Analysis (t. 230). These three branches are, 1. The Dialectic of Aggregation and Dispersion, which, in its fundamental aspect, is that of Addition and Subtraction (Punctation)-Arithmoid. c. 1. 2. The Dialectic of Co-lineatioy and De-

Commentary t. 3SS. 1. I have among my manuscripts an elaborate demonstration of the proposition: That the whole of Arithmetic is reducible to the two Processes of Addition (Unismal), and Subtraction (Duismal); Multiplication being a Compound Method of Addition merely, and Division a Compound Method of Subtraction. Perhaps the idea is too obvious, on a mere statement, to require any other demonstration. Recently, I find, at all events, the simple statement to the same effect, in a work entitled "The Living Forces of the Universe," by George Wm. Thompson (of West Virginia). This book is one among the many noteworthy efforts, more or less conscious, recently made towards the Discovery of a real Universology.

Lineation (Lineatron or Limitation)-Geometroid. 3. The Dialectic of Composition and Decomposition, the method of investigating which is by Analysis-Analytoid (Punctalineation). The following Table makes the corresponding exhibit:

## TABLE 26.

3. Dialectit of Composition and Analysis. Decomposition (Analytoid).
4. Dialectic of Co-lineation and

Geonetry.
De-lineation (of Lineation or Limitation).

1. Dialectic of Aggregation and Dispersion (Addition and Subtraction).

| (1.0) 2.) 3$) 3$. | (2.) 3$) 3$. |
| :--- | :--- |
| $(1.0) 2) 3) 2.$. | $(2) 3) 2.$. |
| $(1.0) 2) 8) 1.$. | $(2) 3) 1.$. |

389. The Dialectic of Composition and Decomposition then subdivides into the Analogues of 1. Algebra ; 2. The Differential and Integral Calculus; and 3. The Calculus of Variations (t. 281). Composition or Synthesis has no definite recognition in Mathematics, but only the Critical and Inverse process of Analysis. It is this, therefore, which must furnish the Analogues in question. The basic or fundamental Analysis of All is that which discriminates Time Parts from The Whole ( t . 265). This it is which furnishes the Principles now being recognized as fundamental in Science, called Differentiation and Integration-the first related to the Parts, or the Part-like Aspect in the Constitution of the Compound or Univariant Whole, and the latter to the simple Wholeness-aspect as the other and ecual Factor of the same Compound Conception. (t. 306).
390. More fundamental than the other pole of the difference -between the Differentiation and the Integrism-is the Ideal Unity which resides in the Equality or Parity between them. This, then, is the essence of Equation ; and the External or Objective Science of Equation is Algebra. The most fundamental idea of all Science, says Spencer, is that of Equality. Algebra is therefore at the bottom of the Trigrade Scale in the distribution of "Analysis," and the corresponding department of Philosophy we may denominate The Dialectic of Equations. Next above Algebra is the Express Antithesis of the Differential and the Integral Calculus. To this I will oppose, in Philosophy, The Dialectic of Partivess and Wholeness, or of Fractionism and Integerism; which brings us back again to the discussion previously had of the Subjective and the Objective Difference (t. 310). Finally, against the Calculus of Variations stands, in Philosophy, The Dialectic of Statism and Motism, in Space and Time, as involved in Rotation and Rates of Velocity; in deviation, in other words, from the Simplicity of mere static distribution into the Whole and the Parts. This is the culmination of the idea of Antithetical Reflection and Balanced Vibration in Philosophy and in Science, respectively. The Table below makes the corresponding Exhibit:

TABIE 27 .
3. Dialectic of Station and Calcules of Variations. Motion.
2. Dialectic of the Parts Differential and Integral AND THE WHOLE. Calculus.

1. Dialectic of Equations (Comparisons of Equality).
(1.0) 2.) 3) 3) 3.
(2.) 3) 3$) 3$.
(1.0) 2.) 3) 3 ) 2.
(2.) 3) 3$) 2$.
(1.0) 2.) 3) 3) 1.
(2.) 3) 3$) 1$.
2. There is space for a word only concerning the Philosophical Analogues of Abstract-Concretology, Clef 1. The Analogue of Chemistry (1) 1, is the Philosophy of Affinity and Attraction, whence Gravitation, but enlarged to the Unification of this Phenomenon from the relation of Atoms in the Constitution of Substance or Matter to that of Worlds in Space, (Astronomical), and of Individuals as the Atom-Worlds which constitute Society, (Sociological). There is then, here also, less prominently, a real Dialectic between Attraction and its opposite, which is Repulsion. This last is expressed with great (proximate) uniformity in the Lower Domain of Nature by the conception which we call Heat. Hickok has accordingly grandly conducted his whole discussion of Cosmology to its Ultimatum in the Antithesis of Attractron (or Gravitation) and Heat. In the Higher Social Domain, by a characteristic Terninal Conversion into Opposites, Heat, as Love or Passion, becomes Attraction ; and Coldness, its Opposite, is Repulsion. The Mutual Complacency, by Organization and Culture, of certain Characters or Natures in each other, has become of late much talked of as "Affinity." It is an idea spoken of lightly, as yet, in the Scientific World, but one, nevertheless, which has immense significance. It is at the basis of Fourier's doctrine of "Passional Attraction," of Powell's "Compatibility of Temperaments and Scientific Propagation of the Race," and of much else that is new and startling in the world. This is properly the Domain of Soclal Chemistry, a Science heretofore without a name, and which is blindly struggling to get itself constituted as a Science.
3. Physics, (1) 2, is the counterpart of Chemistry, as Aspects are so of Substance. The basis of the Science is Somatology, or the Summing up of the Universal Attributes or Properties of Matter. These are enumerated by Prof. Henry as the following : 1. Extension, 2. Impenetrability (these two necessary to our perception of Matter), 3. Figure, 4. Divisibility, 5. Porosity, 6. Compressibility, 7. Dilatability, 8. Mobil-
ity, 9. Inertia, 10. Attraction, 11. Repulsion (8, 9, 10, and 11, the Ultimate Properties, according to the Molecular Hypothesis), 12. Polarity, 13. Elasticity. (1). The distinct discrimination, as between Chemistry and Physics, that Chemistry is the Science of the Substance, and Physics of the Properties (or "Affections") of Matter, although, by Overlapping, each invades the domain of the other, is important, and, I think, new. They have in this respect an analogous relationship, which will be elsewhere pointed out to a part of the Substantive and to the Adjective Grammatical Domains. For Physics I would suggest Symbolology as the Philosophic Counterpart.
4. Thernotics, or the Specific Science of the Laws of Heat, as Endo-Mechanics, I have elsewhere suggested, as appropriately replacing Spencer's "Mechanics" among the Sub-sciences now in question. (t. 272). This has the Clef (1.) 3 ; and its Philosophical Analogue is the Social Mechanics (of Worlds or Men), in so far as these are allied with Chemistry rather than with mere Mathematics. The following Table makes the corresponding Exhibit:

## TABLE 28.

| 3. Repulsionology | $(1.0) 1) 3$. | Thermology (1.) 3. |  |
| :--- | :--- | :--- | :--- |
| 2. Shmblology | $(1.0) 1) 2$. | Physics | (1.) 2. |
| 1. Theory of Attraction $(1.0) 1) 1$. | Chemistry | $(1) 1.$. |  |

394. We are prepared now for a restatement, in a more thorough sense, of the Distribution of all the Possible and Actual Cosmical Conceptions of ordinary men and Philosophers. These, in an order now reversed, and ascending from below upwards, are exhibited in Tabular Form below.
[^58]The Analogical Scientific Discriminations are made the basis, and the Philosophical Discriminations are simply annexed.

TABLE 29.

O. NON-STABILIOLOGY. The Firmament reduced to mere Appearances $=$ Nibilism.
395. With this we conclude the present consideration of the Cosmological Conceptron, and we pass to the next lower Grand Aspect of Philosophy, which is The Psychological Theory. This answers to the Science of Pneumatology, the next higher Grand Aspect or Elevation of Echosophy; for, as, in descending into the Cellars of an Edifice, it is the Lowest Vaults which repeat, inversely, the Vaulted Roof above, so, in distributing Philosophy, we descend from depth to depth in answering gradation to the ascent by successive Stories which we make, in passing from the base to the summit of the Temple of the Sciences. The Psychological Theory is then (1.0) $2^{\text {nd }}$, as counterparting the (1.2) $2^{\text {nd }}$ of Echosophy.
396. Soul and Spirit are terms which, if not synonymous, are often confounded. The Greek for Soul is Psychē, from which we have Psychology. The Greek for Spirit is Pneuma, from which we have Pneumatology. Such is the nearness of the relationship between (1.0) $2^{\text {nd }}$ and (1.2) $2^{\text {nd }}-$-the middle regions within Philosophy and Science respectively.
397. The question of the Origin of Ideas, or of the mode in which Ideas enter the Mind, or of how they primitively exist there, called also the Philosophy or Theory of Perception, has been the chief battle-ground of Philosophy. Sensation stands, in this discussion, opposed to, or contrasted with, the Innate Element of the Mind itself, which perceives Relation or Law as intervening between the Items or Particulars of Sensation. It differences them while yet uniting them, in a new and compound Higher Unity, for which the term Univariety is appropriate. Sensation is, therefore, the Substance, and this Innate Element, supplied by the Mind, Perception, as distinguished from Sensation ; is the Form of Ideation, or, more properly, of Mentation entire. Is then the Perception wholly derived from the Sensation, which is the Doctrine of Sensationalism ; or is the Sensation an appearance merely, wholly projected from the imaginative and, as it were, creative Mind, which is the Doctrine of Idealism ; or are the Sensation and the Perception (the Feeling and the Knowing) Co-ordinate, although Inseparable Functions of the Mind, which last is the Integralistic Position, towards which all Philosophy is rapidly tending ;-although Integralism finds a place, on its Transcendental Side, for each of the other opinions, and so is reconciliative of them all. (c. 29-33, t. 136; a. 1-10, c. 32, t. 136).
398. The question is transferred, by our Scientific Analogy, from the Intangibilities of Mentation to the Tangibilities of External Substance and Form. From these it is brought, finally, wholly within the realm of External Form, as follows: Substance is composed of Atoms. Atoms are re-presented abstractly by the Units of Number. Number is hence
the department of the Abstractismus which echoes to, or repeats, Substance, or the Concretismus entire ; while Form, as a department of the Abstractismus contrasted with Number, an opposite department, echoes to, or repeats, the Abstractismus itself within the Abstractismus, as it is contrasted with the Concretismus. But, finally, Number is itself again echoed and represented within the domain of Form, by the Punctismus of Form; the Liniismus representing, on the other hand, Form within Form.
399. Points (the Punctismus) come therefore to be the Analogues of Substafce; and thence by a recursus to Mind, of Sensation also ; and Lines of Form universally, and then of Thought, Ideas, Knowing, or Perception, as contrasted with Sensation. The question at issue is therefore transmuted into this: Are Lines in all Senses derived from Points; are Points in all Senses derived from Lines ; or is it alike true, Conversely, and by Inherent and Inexpugnable Conjunction in the nature of Being itself, that each is derived from the other in turn, and that both as elements are ever-present in the Constitution of each ; as in respect to the two Sexes in the ordinary process of generation? As Elements of the Conception, but then as pure Abstractions, which are alwoys pure Nothrngs, having no real Existence, they may be, theoretically, separated-but this is then Pure Transcendentalism. (a, 8, c. 32, t. 136),
400. Sensation and the Latin sentire, to feel, are Etymological Cognates of the Gr. Kentron, Eng. Centre (the $k$ broken down into $s$, as in respect to pronunciation it is also, in the English word Centre). Kentron is from Kenteo, to frick, GOAD, sting; to make pornt or points. Sensation is then the aggregate of Pricks, Stings or Stimuli, analogous to Point or Points, which External Nature makes upon the Subject-Mind; and as this penetration is done by pressing in upon the Mind, Sensation is also called Impression. It is a Preliminary Impregnation of the Mind by Nature, as the Toman impregnates the Man with passion by her feminine

Aura. It is not the Analogue of masculine impregnation, which is a subsequent and reflex action, like what the Mind performs upon External Nature ; with prolification thence, namely, the Products of the Culture of the Earth, and Works of Art.
401. The successive Stimuli of Sensation constitute Experience, whence Sensationalism and Experientialism are Synonymous. Both are related to Materialism, as substantially another Synonym. Perception is primarily Discrimination, and discrimination is primarily division or CUT, whence also Line. The Least Element of Fact or Experience is then the Analogue of a Point ; and the Least Element of Discriminative Thought is The Analogue of the Least Element of Line. Lineation is to Thought what Punctation is to Sensation, discriminating and then connecting all the least Elements, Atoms, or Points of our Sensation or Experience.
402. The Pornt, the Analogue of Fact, Sensation, or Experience, is at the same time Monochrematic or Monospheric, terms subsequently introduced and explained as meaning that which relates to a Single Thing or Object, or to a Single Sphere as contrasted with the Comparison betwoen Different Objects and Spheres. (t. 403).
403. The Line is, on the contrary, Comparatoid, or, by its very Nature, Interventional, or altemately Separative and Connectional between Points, Objects, Analogous Spheres, etc. The Antithesis between Monochrematic or Monospheric Science on the one hand, and Comparative Science or Sciences on the other, is hereafter to be a leading and profoundly important distinction, as will be shown more extensively in the "Structural Outline." We are now to have Transcendental Science and Sciences, as we have had heretofore Transcendental Philosophy. Hickok has, indeed, already introduced and variously reiterated the term Transcendental in connection with Science as such. It will now be readily apprehended how this Antithesis echoes, in the Scientific Do-
main, to the distinction in question between Sensationalism and Transcendentalism.
404. But in a more special and concrete way this distinction also echoes to the leading division between the different Stories, Elevations, or Domains, of the Pneumatismus. The Transitional Processes of Impregnation, Birth, and Death, find themselves especially intricated with Spiritual Affairs. The Mind and the Entrance of Ideas into the Mind are the Analogues and Precise Types of The Spirit-World, and of the Entrance of Souls or Spirits at death into it. Points represent Entities or Individuals, Things, Objects, Persons. In this more special connection they represent Individual Persons. It is certainly not Objects themselves, bodies as such, which enter the Mind in the crisis-action of Sensation, but some film or ghost of the Material Object; "the vicarious assurances, representations or nuntii of real unknown Objects" (a. 4, t. 336); such at least is the view of the operation held by Cosmothetic Idealists, which, even by the admission of Hamilton who prefers another view, have been the vast majority of all philosophers. The Real Object dies then, and is buried as rubbish, at the instant when its ghostly essence is transferred to the Mind, and is raised or resurrected in it, as an Idea,-or by Analogy, as a Spirit in the Spirit- World. Swedenborg, looking as it were from "within the Vail," makes the entrance of the Human Individual Spirit, at death, into the Spirit-World, to be "THE Resurrection."
405. The Inferior or Lower and Earthly Career of the Point or Thing in this Transitory (Experiential) Sublunary or Temporal World, may, it would seem, be repeated in a worse sense, by the Ghost of the Point after entering the world of Ideas, if then it retains still the sensual quality of the outer world in a degree to unfit it for the normal destination of the new abode. Hence it is in that case condemned or DaMrved ; and assigned to the Lowest Range of this Attenuated and Ghostly World. Hence Hell or "The Hells" repeat in that World, The Outer

Material World, "The Earth ;" and Heaven, or "The Hearens," repeat the Higher Interior Ideal World, representatively, within that World. There remains, then, an Intermediate or Trial World between these two ; a mere Judgment Hall, where the quality of each Spirit is tested, and the determination is made which assigns it to Hell or to Heaven. This is the Purgatory of the Roman Catholic Church, sometimes also called Hades, and "The World of Spirits" of Swedenborg (to be carefully distinguished from the larger term "The SpiritWorld," which includes the Heavens, the Hells, and the World of Spirits). a. 1-2.
406. Furthermore, Transcendentalism, as the Supernalism of Ideas, is the Analogue of Heaven :-Coinciding with Space or


#### Abstract

Annotation t. 40さ. 1. I copy from one of the daily papers, the N. Y. Times (Review of Longfellow's Translation of Dante's Dirina Commedia) the following judicious discriminations between these different riews of the Intermediate Spiritual World, and other related subjects: 2. "DANTE, adhering always to the dogmas of the Roman Catholic theology, depicts purgatory as a place where, after death, the good are cleansed of the evils which still cling to them, and prepared for admission into hearen. In Swedenborg's counterpart of this picture, not only are the good thus purified from all that is depraved and false, but the wicked also are purged of whaterer good qualities and true ideas are still lodged in them. Thus persons of both classes are gradually rendered complete and congruous with themselres, the one being prepared for hell as the other are for hearen. According to Dante, the blessedness of heaven consists in the immediate intuition of the dirine ideas by the individual spirit, that is to say, in the rision of God himself; but with Swedenborg, hearen is not only the abode of the high-


est truth and of perpetual progress in its knowledge, but it is also the scene of infinite varieties of art, industry, and beauty, and of social harmonies, felicities, and usefulness, without limit or end. In the theory of Dante, the future life is in some sort but an extension of the present. The punishments of hell are material torments ; and there, as well as in hearen, men carry with them forever their present material bodies of flesh and bone, raised at the last judgment and restored to their possessors. In the doctrine of Swedenborg, on the other hand, the last judgment is a spiritual event, long since past, and not a future thing to be expected. The material body decars and is nerer restored; but each man has a spiritual, incorruptible body of human form like the material, in which his sonl lives forever; while the world beyond the grare is so intrinsically superior to the present world, that its inhabitants, though alwars spiritually associated with the souls of men on earth, can hare no perceptible contact with them, nor any knowledge of the outward occurrences and circumstances by which they are surrounded."
the Great Expanse seemingly over our Heads. Experientialism (Lat. ex, fronr, per, through, and ire, to go-going from a beginning through to an end, as in Time, whence Temporal, Lat. Tempus, Trme) is the Analogue of Earth, or the External Sensible and Material World, and then by repetition, within the Spirit-World, of Hell, as the Infernalism or Lower Domain of Ideas. There remains, then, between these two, the Purgatorial World which is mixed. These are in respect to Philosophy, then, (0.1) $\mathrm{Z}^{\text {nd }} 1^{\text {st }}$, Traifscendentalsim (0.1) $2^{\text {nd }} 3^{\text {rd }}$, Sensationalisar, and (0.1) $2^{\text {nd }} 2^{\text {nd }}$, Eclecticisir.
407. I would ask pardon of Mr. Mill, or of whosoever else may be taken as the representative Man of Experientialism, for making it the Analogue first of that which is " of the Earth, earthy," and then of that which is infernal ; but really I am not responsible for the fact that my figures bring me out in this way. Perhaps also in the end it may appear that Earth and Hell are somewhat more respectable in the total constitution of things, and Heaven somewhat less so, relatively, than our theologians have taught us to suppose. Indeed, even in their own Scriptures there are intimations that the Old Heavens and the Old Earth are not permanent, but that both are, "in the fullness of time," to be "rolled up as a scroll," and to disappear. (1). Let us see if we can discover in a manner how this may occur.
408. Heaven again finds its Analogue in The Interiors and Superiors of the Human Body-typically and objectively in the Bratr and Head ; Earth and Hell have their Analogous Regions in the Exteriors and Inferiors-typically and objeciively in The Trunk and Limbs. Finally, The Ingestive, Digestive or Discernant Region of the Interior World; the
(1) And all the host of Heaven shall be dissolved, and the Feavens shall be rolled together as a scroll; and all their host shall fall down, as the leaf falleth off from the vine, and as a falling fig from the fig-tree." Isa. xxxiv. 4. "And the Heaven departed as a scroll when it is rolled together; and every mountain and island were moved out of their places." Rev. vi. 14. "And I saw a New Heaven and a New Earth ; for the First Heaven and the First Earth were passed away." Rev. xxi. 1.

Purgatorial or Purgational Passage-way from the Exterior to the Interior, and from the Superior to the Inferior Domain"Purgatory" or "The World of Spirits,"一has its Analogue in the Alimentary Canal-typically and objectively in the Neck, or, more specifically still, in the Throat or Gullet, the Swallowing-place, which represents the entire Canal. To recapitulate: Heaven is represented by the Head; Hades, the Immediate Entrance from the External World by the Throat; and the Lower World, Earth and Hell, by the Trunk of the Body. These Correspondences will be reconsidered and compared with those of Swedenborg on a subsequent occasion. The subject occurs here only incidentally. That which is down or beneath is instinctively regarded as base or vile; as that which is above has the opposite characteristic-a sentiment subject, however, to certain ulterior reversals which will be indicated elsewhere.
409. If these analogies be accepted as correct,-and further investigation will tend constantly to confirm them, -then any absolute Separation of Heaven from Hell (or of Transcendentalism from Experientialism), such as did not leave them still in a constant and vital connection through the Intermediate Region symbolized by the Neck and Throat, has its Analogue in the destructive process of Decapitation, or in its representative, Throat-cutting. This has been, in fact, hitherto, the favorite method of Suicide, both in Theology and Philosophy. Abstraction (drawing asunder) carried to the Absolute, is alroays Death. A Heaven which is to be the pure, unalloyed abode of Good, without even an Element of Evil, and a Hell as an equally abstracted Absolute and unalloyed abode of Eril with no Good,-no Compensations whatsoever,-are such violent contradictions of all Analogy and sane Reasoning that they end in the destruction of Faith altogether. These are the ideal Heaven and Earth (or Hell) of the Old Order, which, at the Adrent of the New Order, will take their flight forever from the Human Imagination. Still, however, as doctrines
held in the Past, they have not been useless conceptions, nor, in their influence in the Future, as Limits or Regulative Forms of Thought, will they cease to have an essential importance.
410. So in Philosophy, Ferrier has shown triumphantly and conclusively, in his Institutes of Metaphysic, that Sensation and Perception, (Feeling and Knowing), Sense and Thought, are not separate and different classes of Ideas in the Mind, but that they are different Elements or Aspects inherent in every Idea or Mevtal State whatsoever; or, if any confirmation of this doctrine were still wanting, it would be found abundantly in the Expositions of Universology, throughout. To separate these factors in even the least item of Mentation, would be the same as to separate Unism and Duism, the Wholeness-, and the Partness-aspect of Being absolutely from each other. This is impossible and inconceivable ; since they are, as abundantly proven in this work, the inexpugnably united Aspects, Elements, or Factors of Being as Such, or of the Conception which we necessarily entertain of it.
411. If now we reflect these Characteristics of Mentation upon the Theological, or rather the Pneumatological Subject, it will appear that a Heaven of Absolute Good, and a Hell of Absolute Evil, are alike impossible ; that neither can these two Elements-Good and Evil-be Absolutely Separated in the Nature of Things ; that the most which can be effected in the Concrete or Real World is in the nature of a mere Preponderance, (however extreme or tending towards the Absolute), of the Good over the Evil, or of the Evil over the Good; that in the Abstract only can the Absoluto-Absolute Separation occur. This Absolute Abstract is unreal, imaginative, a pure assumption of the Mind, with no corresponding Objective Reality, as addressing itself to the Understanding, (whatsoever Faith may still continue to proclaim). The Heaven and the Hell of this Order must therefore disappear from our intellectual conception of the Actual or Real Constitution of Things. Like all Absolutisms, they are convicted of being, for
us, or for beings constituted as we are, or as we can conceive any beings to be constituted, in themselves pure Nothingswhile yet they remain the legitimate Limits upon our Conceptions, in the two Opposite Directions. The Angels correspond then to the higher, more refined, and more intellectualized classes of our ideas; and the Demons of Hell to those which are comparatively sensuous or base.
412. It results, that the middle region of the Spirit-World between the Limit of Absolute Good and Absolute Evil, above and below, is the whole of what is real, and fills the entire space assigned to the Conception. The World of Spirits of Swedenborg expands, in other words, in a sense, to the dimensions of the Entire Spirit-World. Apart, in still other terms, from the true Intestinal or Purgatorial World, the Analogue of the Alimentary Canal, the whole Interior of the Head and Trunk of the Grand Man, as the whole Rational Universe is called, are likewise Concretoid, or a Mikton of Good and Evil ; that is to say, it embodies, throughout, ALL Abstract Principles, whether in their ideal Abstractness they are regarded as Evil or Good, the real difference being in the Proportions and Adjustment of Elements. Absolutisms disappear upon investigation, on all hands, and vanish into pure Nothings. The two Primitive Elements, reappearing themselves under new diversities of form, and then in different degrees of admixture, constitute the Actual Totality of Things. Life and Death, Good and Evil, Simplicity and Complexity, are infinitely and everywhere compounded. Optimism and Pessimism must give place, therefore, to that which is $O p$ timoid and that which is Pessimoid, merely. We are restored, thus, to the freedom of the Intellect, and are authorized to critically investigate the Supernal and the Infernal Spheres, and rigorously to scan the respective pretensions of each. It may, in the end, be found that there are Occult Elements of Good in the Lowest Hells, and hidden Germs of Evil in the Supremest Heavens of the Old Order, and that the True "Final

Judgment" will make some serious disturbance of things long since thought to be definitively settled. Still the fact remains that there are Higher and Lower; that there are Health and Disease ; that there are Proximate Perfection and Gross Imperfection, in this world and all worlds. The Absolute Heaven and Hell disappear only to give place to a Relative Heaven and Hell, more tangible and appreciable. There is at least such difference between the different Stories of the Great World-Cathedral in the World of Souls, as we witness between the different ranks and conditions of life, in the world here.
413. Hitherto I have treated the birth of Spirits into the Spirit-World as analogous with the birth of Ideas into the Mind, in accordance with the theory of Constructive Idealism, which separates the film or ghost of the External Object from the body of the Object which at the instant of this birth it leaves to he buried away out of sight, as the bodies of men have fallen away upon their definitive entrance into the Subjective Spiritual Abode. But Sir William Hamilton, among the latest and greatest of the expositors of the doctrine of this subject, abjures this method of construing the process, and discards the separate ghostly stage of the procedure. Presentative Knowing, according to him, may very well dispense with this filmy intervention. We may, nay, as he thinks, do have " a direct, immediate, face-to-face Knowledge of Objects in an External World." (Masson).
414. It is the Ultimate Postulate, the quod erat demonstrandun, of Universology, that wherever any sane mind has seen a truth, there there is a truth; that the whole Truth is therefore as manifold as the Capacity of Apprehension; in other words, and in general terms, that every Doctrine, even the most divergent, that has ever seriously been held, covers some Aspect of the Truth; and that the Final Harmony of Truth will consist in the Recognition, Specific Designation, and Complete Systematic Unification of all these seemingly Con-
ficting and Irreconcilable Phases of Truth. Such is Tre Grand Reconciliation of All Doctrines which The Peiflosophy of Integralism propounds. c. 1-2.
415. This doctrine, then, of Real Presentationism in the act of Knowing the External World, held by Reid and Hamilton -what does it signiíy? The Analogy has held good between Constructive Idealism and what we know or tend to believe of the Separation of the Soul and the Body at death; as the facts of life and death have existed in the Past. But suppose that, in another age, from now on, for instance, it shall happen that the Spirit-World and the Outer World have so interpenetrated and blended with each other, that, in passing from the one to the other no such violent disruption of the Soul and the Body need actually to occur ; suppose it shall prove as the scientific verity that Death, as it has happened in the past, is abnormal and destined to be abolished; that the Spirit-world with all its Capacity for at least Proximate Immortality is to be let down, so to speak, into and among men,

Commentary t. 414. 1. The precise statement of this Principle, so as to guard against all possible cavil, may require to be hedged about by more cautious provisos. I have preferred, however, that it should stand here boldly, and that it submit subsequently only to such limitations as it must. The spirit of the statement will hold good, whatever deductions from its literal exactness the microscopic eye of criticism may discover in respect to it. Perhaps these will be more than compensated by the penetrating glances at recondite and exceptional phases of truth caught by diseased or insane minds, which may on single subjects be wiser than the more cautious and commonplace convictions of sanity.
2. It is easy to criticise an epigrammatic and terse statement of doctrine. Of course, it may be said: Where any one sees a truth, there there is a truth ; but this is the very question at issue : whether what he sees is $a$ truth. Let us change the expression and affirm that where any one sees a tree, there there is a tree. What is meant obviously is that: The conviction that one sees an object ( $a$ truth or a tree) is the strongest presumptive evidence that such an object is there,-subject to only so much occasional exception as imperfect vision or hallucination may induce. When Christ says, "From him that hath not shall be taken away even that which he hath," nothing can be more absurd than the literal terms of the statement; but we have no difficulty in understanding it, and we feel that it is more forcibly said than if the language were more measured.
whelming them with the same Spiritual Capacities ; suppose, in fine, that Immortality in the Body, or its equivalent, is the normal or God-intended Destiny of the Race: Should we not have in this smelting, as it were, of the two worlds into One, the proper Analogue of Reid and Hamilton's Psychological Doctrine? May not therefore both Doctrines be true and assignable merely to different Epochs or Stages of Development, in either case?
416. We have, in the Phenomena of Trance, the image and prophecy of this nearness of the two worlds and of their capacity to co-exist in the experience of the same individual. The Trance-Subject is therefore a real Medium ; and may not Men and Spirits both become incarnations of the powers and elements of each world in a sense superior to the manifestations of life hitherto put forth in either? c. I. Is not this the overt signification of what has been Mystery in the past; the burden, perchance, of the Pregnancy of the Womb of Time? Are we not now at the birth, as it were, of this New Order of Life for Humanity? One hundred years ago, speaking with proximate accuracy, by the testimony of Swedenborg, he witnessed, in the Spirit-World, the occurrence of a Grand Event which he regarded as "The Final Judgment," prophesied of in the Older Scriptures. From that time there was to be a new influx from that world into this; the passing away of Old Things and the making of All Things New. Certainly, the Intervening Century has been in some sense a remarkable fulfilment of the Expectations of the Seer. Some twenty years ago

Commentary t. 416. 1. I do not feel inclined to apologize to the Conservative and backward-holding portion of the Scientific World for assuming here that Trance and "Mediumship" are real Phenomena, and that in those states new faculties of the subject are brought into action, or ordinary faculties so wrought upon us as to exhibit extraordinary function. If these facts are not established, no amount of evidence can establish any fact, and it does not become those, with whom such occurrences have long been a part of their ordinary knowledge, to defer to the voluntary or prejudiced ignorance of others.

Andrew Jackson Daris witnessed, in one of his interior states, a somewhat similar transaction, a Congress of Representative Spirits in the Spirit-World, and a formal preparation for a more définitive intervention in the affairs of this Outer Sphere. The Outburst of Modern Spiritualism, with its Conversion of Millions, and its influence over all minds, has followed, and is not an ordinary event.
417. I am thus forced by the current of inrestigation to the borders of some of the most extreme riews of Human Destiny, and to a glancing notice, at least, of some of the great Influences and Events with which the age we lire in is in labor. A full discussion of these subjects would be premature. A Scientific Exposition is not the occasion for the propounding of a Creed; while yet all things are so interlocked with all things else, that, from the strictly Scientific point of view, these subjects are now legitimately before us, and demand a somewhat further consideration.
418. The Idea which enters the Mind from without, (analogue of the Individual Spirit entering the Spirit-World), may be more or less cognate with the Superior, that is to say, with the more Attenuated, nature of that world. If it be Matteroid or Experientiod or Temporoid, and so still predominantly related to the External Fact only; "of the Earth, earthy;" it is destined to descend into the Inferior Sensuous Portion of the Mind, which is then the Analogue of Hell in the SpiritWorld. On the contrary, if the Idea be in its nature Spiritual, such as the Mind has loaned to Matter and reclaims from it; as Hearen lends superior Souls to earth and soon reclaims them; it passes upward to its native abode in the Superior Portions of the Mind, analogous with Heaven. Ideas which are still in the process of being sifted, and purged, and assigned, then correspond with Spirits in "The World of Spirits," the Vestibule of "The Spirit-World."
419. But Ferrier has wisely and conclusively shown that every Idea has in it both a Matteroid and a Spiritoid Element.

This doctrine is the Analogue of Swedenborg's statement that all the Angels are derived from the Human race ; and also with his other statement that Men, while in this world, are, as to their "Interiors," already in the Spirit-World,-into which, it may be added, the Medium swoons away more or less completely when in trance. So also Swedenborg adds that Spirits in the Spirit-World are at all times consociated and conjoined with men here ; insomuch, in fine, that it is not always possible for us to know our own individual thoughts from such as are interpolated into our minds from that source. We are thus brought back to the intimacy between the two Elements which Conspire in the Constitution of our lives, like that of the two Elements in the Composition of an Idea (Ferrier), and like the face-to-face Conjunction of the Mind within and of Matter without in the act of Perception, according to the Real Presentationists or Natural Realists (Hamilton, for instance). The following Table will now exhibit the parallelism of the Philosophic and Scientific Distribution of this region of Being and Knowing :-

## TABLE 30.

Philosopitic (1.0) $2^{\text {nd }}$.
3. Transcendentalism (Pure Ideas).
2. Eclecticism (Discriminative).

1. Seissationalism (Sense, Experience).

Echosophic (1.2) $2^{\text {nd }}$.
Supernology (The Hervens).
Interismology (Purgatory).
Infernology (The Hells).

| $\left.(1.0) 2^{\text {nd }}\right) 3^{\text {rd }}$. | $\left.(1.2) 2^{\text {nd }}\right) 3^{\text {rd }}$. |
| :--- | :--- |
| $(1.0) 2^{\text {nd }} 2^{\text {nd }}$. | $(1.2) 2^{\text {nd }} 2^{\text {nd }}$. |
| $\left.(1.0) 2^{\text {nd }}\right) 1^{\text {st }}$. | $\left.(1.2) 2^{\text {nd }}\right) 1^{\text {st }}$. |

420. Of the Three Swedenborgian Heavens, the First or Lowest is that in which the Sensuous Element, though not predominating in ruinous excess, is stiil characteristic ; it is therefore Sensuous Harmony The Second is Rational-Spirit-
ual ; and the Third is the Harmonious admixture of the Sensuous and the Rational-Spiritual,-the ecstatically Divinized Domain of High and Pure Sentiment ; Sense, Intelligence, and Sentiment, respectively, all in their harmonious and normal development, and harmoniously united. c. I.
421. Observe now the Analogies. All of this Display is within the Natural or Primary Course of the Development of Ideas in the Mind, and within the Primary Development of the Spirit-W orld; namely, the Development of that World such as it has existed in the Past. During this Primary career of Philosophy, Materialistic Conceptions have predominated; and Transcendentalism has played a Subordinate part,struggling for recognition merely. But with the ScientoPhilosophic discovery, and the Conclusive demonstration of Universal Lavos, A Grand Terminal Conversion into Opposites occurs ; a Trenchant and Decisive Revulsion of the Human Mind ; a Planting of Permanent Foundations Above, in the Empyrean of Thought; and the Subjugation of All Sensuous Experience to the Dominant Sway of a Supremely Transcendental Philosophy,-not to the Exclusion of the Sen-

[^59]suous Element, but in a Preponderance over it, corresponding inversely to the previous preponderance of the Opposite Element. This repeats, in the World's History, what happens in the Individual Mind, when the Mind, as Intellectual Potency, reflects, (bends back), and reacts upon the accumulation of Sensuous Ideas in the Mind, and brings them into Rational Order. This is the next Process of Thought after and above the Preliminary Sensation. It is truly and really a Passing of Judgment, upon the History of the Past, in the Mind.
422. This then is as if The Heavens were to reverse the whole direction of their merely Spontaneous energy-by which they were retiving by higher and higher attenuations, away from earth,-and, by reflecting and reacting upon the External World and the Hells, were to reduce them into Order. Or, if we adopt the form of thought of Ferrier instead, then it is The Centering Self-Consciousness within the Mind, the Eqo or Absolute Personality, which reacts in this Kingly way upon All within the Mind,-operating, through the Laws of the Reason, upon the Material in the Mind contributed by the Senses.
423. The Analogue of this last Conception is that the Heavens act, in the Grand Revulsion here sketched, not of their own Spontaneity, but that The Lord in Heaven, the Central and only Absolute Personality therein, reacts, first upon the Heavens, and then, through them, upon the Outer or "Ultimate" Domains beyond. This whole transaction, when completed,would then be literally "the holy City, New Jerusalem, coming down from God, out of Heaven, prepared as a bride adorned for her husband." (1). The Beginning or First Stage of this descent,-the account and meaning of it left somewhat vague and incomplete,-is, apparently, the nature of what Swedenborg claims to have witnessed, in the Spirit-World, as "the Final Judgment." It is also in the recognition of this

[^60]thought, that he has figured as the founder of "The New Church," also called "The Church of the New Jerusalem." The Analogous First Stage of the Analogous Event in respect to the Individual Mind is what was adrerted to at the commencement of this work as: The reactions of the Mifinct, first upon the Impressions from without to recast them into the Forms of Thought. (t. 8). This First Stage of the Grand Event is, in both cases, however, only transitional, and preparatory for an Ulterior and more manifest Action objectively, or in "Ultimates" themselves.
424. If then the re-awakening of Men in the Spirit-World after death, is entitled, in a sense, to be called a Resurrection (t. 404), how much more trenchantly and decisively so would be the regurgitation of the population of the Spirit-W orld upon this world, should some event of this kind actually occur! Such an event would come up to the dignity of the traditional Conception of "The Resurrection of the Dead," while it would also revert, as the Third to the First, into Earmony with the Primitive Doctrine, as held in the Church, from which the Second or Swedenborgian Conception of the Resurrection is a total departure. Is not the patent uneasiness of the Hadean World at this hour premonitional of some crisis of this kind? It is the arousing of the place of the dead to the external consciousness of the outer world. Like the half-dreaming, halfwaking of recent slumber, it is for the moment disturbed and fitiul, and filled with incongruities and extraragance of all sorts. It will soon, I doubt not, be clear and beautiful. It is already replete with significant symbolism, and profound intuitions, with sweet promises, rich consolations, and enchanting ideals. Let narrow scientists and bigoted sectarians, whose fears or prejudices hare hindered them from knowing, be modest in judging of the nature or claims of modern Spiritism. "Judge not, that ye be not judged."
425. So, also, if the Incipient Reaction of the Central Energy in Heaven (called "the Lord") upon the accumulated Spiritual

Materials in the Heavens, preparatory to an Ulterior Reaction and Grand Reconstitution of All Things upon Earth and in the Hells, was entitled to be regarded, in a sense, as "The Final Judgment" (t. 416), or the closing up of an Old Dispensation and the commencement of a New One, how much more trenchantly and decisively so is the Complete Scientific Revelation, in the Objective World, of the Positive Laws of Order and Harmony in the Unirerse of Thought and Being, in accordance with which All Things must now and hereafter be measured and judged, purged and cleansed, reorganized and mac̈e new !
426. Finally, the Third and Ultimate Drift of the Grand Pneumato-Cosmical Evolution will prove to be the Complete Effusion and Re-Projection of the Forces of the Internal Spiritual World upon the Outer Objective World, and the Blending-together of the twoo Worlds in the fullness of the Realization of Harmonic Ends; and, especially, in the Complete Re-Constitution of Human Society in accordance with the Archetypes conceived in Heaven. This will be, in the Ulterior and Completed Sense, the Coming down of the "New Jerusalem from God" out of Heaven. The Wise, and Rich, and Mighty, will gladly assume the function of a Social Providence over the Simple, the Poor, the Feeble Classes. Religion will be a Divine Socialism wisely directed by a True Social Science. War will cease. Porerty, Disease, and Death will be either totally abolished, or greatly mitigated. It is a matter of the measure of our Faith whether we can literally credit with Paul, that: "The Last Enemy that shall be destroyed is Death," (1), or with John, that: "There shall be no more curse" (2) or affliction of any sort. It is this Ulterior Reaction of the Higher and Internal Spiritual Potency upon the Loveer and Outer IFaterial Sphere which is the Analogue of the Ulterior Reaction of the Individual Mind upon the

External World from which it originally derived its impressions ; to reproject them, modified, in the actions of the body, and in the products of these, as the Means of Use and Beauty. (t. 8). Matter thus comes to its own again, in a new and more intimate marriage with Mind.
427. There are, then, in addition to all that has been discussed by the philosophers under the head of Psychological Theory or Conception, two remaining grand modifications of the idea; corresponding, 1. With the Reaction of the Mind (or of the Central Consciousness within the Mind) upon the ideal materials accumulated within the Mind through the Senses; and, 2. The Ulterior Reaction of the Whole Mind, concentrated in the Will, upon the Natural World exterior to it, to conquer and bring it into subjection; to impregnate it, in fine, in the sense which is more specifically the Analogue of the Masculine Act. There are also, as we have seen, two Newo Drifts of Relation between the Spirit-World and this World, which exactly correspond with these New Stages of the Philosophical view.
428. The whole of Swedenborg's Pneumatological Distribution, (Heavens, Hells, etc.) falls, therefore, as Subdivisional, within the First or Primitive Stage, in this larger Distribution of the Development and Activities of the Spirit-World,-his Vision of the Final Judgment lapping over merely into the Second Stage, which is Transitional. The larger division into Three Stages or Drifts now in question, being heretofore unrecognized, and therefore, in a sense, as yet exceptional, I shall notate as follows: The portion of the Clef which relates to this larger distribution will be inserted in full parenthesis, and may then be dropped when this view of the subject is not involved, and the harmony of the Notation so restored with that previously given (t. 301). The Primitive State of the Pneumatismus (the Spirit-World) prior to Swedenborg is distinguished thus: (1.2) $2^{\text {nd }}\left(1^{\text {st }}\right)$; the First or Natural Heaven of it, thus: (1.2) $\mathfrak{2}^{\text {nd }}\left(1^{\text {st }}\right) 1^{\text {st }}$, etc. The Intermediate or Transition

Period is then (1.2) $2^{\text {nd }}\left(2^{\text {nd }}\right)$; and the Third or Ulterior Period, the full Externalization of the Spirit Life and Excellency in the Natural World, is $(1.2) 2^{\text {nd }}\left(3^{\text {rd }}\right)$. This last echoes to the Three Heavens of Swedenborg by Subdivisional Epochs of Harmony in the Social Destiny of Man. These may be regarded as coinciding, in a general sense, with the epochs sketched by Fourier, as, 1. The Dawn of Happiness ; 2. Harmony; and, 3. High Harmony, or the Completed Happiness of the Race on earth.
429. When the Ordinary Cardinal Clefs (1.), (2.), (3.), etc., are introduced after (1.2) $\gtrless^{\text {nd }}$, they denote the repetition, in the Spirit-World, of the distribution of the Outer World, as indicated in the discrimination previously noticed between Pneu-mato-Casmology and Pneumato-Anthropology (t. 39) ; thus : (1.2) $2^{\text {nd }}(1.2) 1^{\text {st }}$, for Pneumato-Cosmology, etc.
430. The One Hundred Years immediately preceding the present date (1867), -since the vision of the General Judgment had by Swedenborg till now,-may, I think, be taken as the first half of a bi-pennate (or two-winged) Transitional Period. The Identical Present, the epoch at which this Sciento-Schemative Programme of Careers is indited and published, is then the Crisis-Centre or Abstract Mere Line of the Transition (c. 6, t. 345) ; and the Hundred Years now following are to be the Completion or other Wing of the same. The Conception of the next Century as the Grand Arena of Events in the World, and especially in the direction of External Organization, is beginning to take possession of the leading Minds, and will soon make itself more and more decidedly felt. c. 1-10.

[^61]431. Dr. Cumming, the Rev. Mr. Shimeall, and numerous other laborious and learned expositors of Prophecy, fix upon the present times, some of them upon this very year, as The Critical Epoch in the World's History. An idea like this is extensively diffused in the Churches. Many leading theologians are looking with anxious expectation for the occurrence of some Great Crisis, the happening of some Supreme
much detestation as we now read of the massacre of St. Bartholomen. Instead of devastating wars, we shall then have grand congresses, a federal council of mankind, in which will be settled the disputes that would now occasion an appeal to arms. Justice will everywhere prevail, and peace and innocence will descend, white-robed, from Heaven, to preside over the clestinies of the human race. The name of this extraordinary nation will be Europe, and its capital will be Paris!" (1). "It will be called Europe in the twentieth century, and, in the following centuries, still more completely transfigured, it will be called Humanity." (2). It does not matter that this sublime prophecy overlooks America and the rising destiny of the Occident. In far less than a century, it can hardly be doubted that the Western Continent will outrank the Eastern, and be the Acknowledged Head of this New and Progressive Humanity.
2. In an important sense all Periods are Transition-Periods; and it is only in degree that certain Epochs are so signalized in particular. If, instead of supposing that the next hundred years from this clate will be a complete transit to a period of Harmony, we assume that it is to be merely the border of a broader belt of History which, as a whole, is to be the Transition in question,-a supposition calculated to seem far more probable to most minds ;-if, in other words, instead of One Hundred, we assume One Thousand Years, for this purpose, we have a literal Millennium, (Lat. mille, a thousand, and annus, a year), as the Transition in question, with then its own vestibule of the past Hundred Years.
3. Many things, under this supposition, come into harmonious relations which have seemed to be very diverse. It is a growing doctrine among students and expositors of the Scriptures, that there hare been, and are to be, not one merels, but two at least, and perhaps three Crisis-Events in the World's History which are covered in a mixed way by the several prophecies of the Old and New Testaments which relate to the "Day of Judgment" or the "Final Judgment," the "Resurrection," and " the Millennium."
4. The first of these, under this interpretation, connects with the Judging and Condemnation of an Old Dispensation at the period of the Destruction of Jerusalem, an event which is then held to lhave been accompanied by a "Second Coming of Christ," which is, therefore, now, in that sense, a long-past event.

Event. These are not "Millerites," nor technically " Second Adventists," but outside of that faith. They are not, for the most part, mere literalists. The Second Coming of Christ to reign on earth in person may not occur; but, in the place of it, some Equivalent Change in the Order of All Human Affairs. The End of the World, and the Burning up with Fire, may mean no more than such completion of an Old Dispensation

This view is held as indispensable'to the consistency of some of the express words of Christ, I have elsewhere (c. 1, t. 186) alluded to it as the doctrine of a branch of the Perfectionists drawn from "The Berean" and other theological works of John H. Noyes. For a similar exposition, from an entirely different source, the reader is referred to a very liberal but strictly "Orthodox" work by Rev. C. L. Hequembourg, entitled, "Plan of the Creation: or, Other Worlds, and who inhabit them." (Boston, 1859).
5. Both of these writers look also for an event in the present age which will be what Mr. Hequembourg denominates a judgment of the Gentile World and of The Semi-Religions now extant. This he believes is to be followed by The Millennium, as a Transition-Period to that completely regenerated condition of the World which is afterward to be perpetual. At the end of this Transition there will be, for a short period, a renewed Struggle of the Powers of Evil; and then, in a sense, a Third Judgment, which will complete the Transitional Millennium, and be the definite beginning of the Final Reign of Harmony destined permanently to endure. The peculiarity here is, that the Millennium is conceived of, not as the state of Normal Perfection, but as Semi-perfect, or incipient of Harmony merely. If we assign a corresponding Hundred Years to the latter Edge of this Millennial Transition, the Thousand Years is carried up by its marginal Supplements to Twelve Fundred Years from the date of the Interior "Final Judgment" witnessed by Swedenborg; and 2967, or, proximately, 3000 years from the birth of Christ, will witness the (supposed) Complete Expulsion of Evil from the Composition and Administration of Human Affairs. By Universological doctrine, the same Element of Evil will continue in Kind, Subordinated only in Degree, or reduced to its Minimum, as we attain the Minimum of Friction in Machinery. (t. 411).
6. These several divisions of the subject, so far as comprehended by him, Mr. Hequembourg not only finds necessary to harmonize the various Scriptures relating to it-especially in the Words of Christ, in Daniel, and in the Revela-tions-but he is surprised and delighted at the reconciliation so cffceted also betrreen the different views of the subject which have been held in the Church. "It will be perceived," he says, "that all have erred, in common with our brethren of the Adventists, in conceiving of the Judgment as a single and distant event. The Adventists, it appears, also, have been right, and all the rest of the world wrong, as regards what they call the Pre-Milleunial Advent of
or World-Order, and the Advent of a New One, together with the Consuming Criticism and Fierce Destruction of Old Things destined naturally to accompany the change. c. 1. The Pietism of the Past, and the Social Aspirations of the Present, are becoming reconciled and confluent. They will be, from now, more broadly co-operative in the Grand Social Reorganization.

Christ, for the Judgment was to occur before the regeneration of the World. It is remarkable in how fragmentary a form this subject has been received in the Church. It must be contemplated also as an interesting fact, that the explanation of this subject by the only key which unlocks it-the Saviour's Discourse -should result in showing that all are right, as the Conversion of the World is a great truth also, and that all can unite in a harmonious opinion. The author deems it one of his greatest causes of thankfulness to the Father of Mercies, that a union of so many minds-which might have been regarded as impossible-may be effected by a less fragmentary view of the subject." (1).
7. But the same drift of enlightened exposition must still go an immense step further forward. It would not be dificult to show, by an extended exposition of views, that the anticipations of Fourier, Comte, Victor Hugo, and the radical reformers generally, including many who rank as infidels and atheists, are, in a broad sense, identical with those of the Christian Church. Changing the dress and shibboleth of Sect, the same ultimate idea underlies the Aspirations of men who stand nominally at doctrinal antipodes from each other. Outside of Christendom, also, a similar Prophecy of a renewal of the Earth and its Inhabitants lies hidden in the hearts and religious utterances of the good men of all ages. Interpreters are not, and will not be, wanting to seek the Spirit of these utterances, no matter how uncouth the shell, and to cause the backward nations to resume their march, from the basis of their own Scriptures, only a little behind the Unity of Christendom, to the Common goal of a Regenerated Humanity. I quote the following from a little work entitled, The Strength of Hindooism, or Hindoo Mythology ; by Eli Noyes, late Missionary at Orissa: "The tenth, or Kalunkee incarnation, (of Bishnon, or Vishnu, The Preserver, or the Presiding God over Providence or Human Affairs), is to appear with the body of a man, and the head of a horse. He is to be attended by a flying horse, and to hold swords eighteen feet long in each hand, with which he is to destroy all the roicked and commence a new era.
8. "Some Hindoo enthusiasts declare that the English are the Kalunkee incarnation. Such accuse their brethren of blindness in regard to the Spirit of their Prophecies. I once saw an old religious mendicant get into quite an ecstasy on this subject. Said he, 'I tell you, brethren, you are all in darkness; you look only to the letter, and do not understand the Spirit of prophecy. The veil has
(1) Plan of the Creation, by R.ev. C. L. Hequembourg, p. 285.
432. The meeting of Sorereigns in Paris at this hour, not under the banner of War, but of Industry ; the spanning of One Ocean by Telegraph, and the Other by Steam Navigation, belting the earth with vital Communication by this New Highway of Commerce; the definitive reversal of the currents of intercourse from the Old Eastern to the New Westerly Direction, the significant synnbolism of which will be expounded
been taken from my eyes, and I see that the English are the Kalunkee incarna-tion,-Glory to the Immortal Bishnoo!" "The Grand Untversal Reconcriarron to be inducted through the Uxity of the Sciences, which, while it judges, also mediates, will reach to and embrace, not merely the Churches and Sects within Christendom, but all the Religions and Segments of Humanity outside of and beyond it,-constituting effectively the Social Unity of the Race.
9. It would seem, in accordance with all views, whenerer any definite exposition of the prophecies has been ventured upon, that, if Christ is to reappear and reign personally on earth, that event should transpire near to this time. Should it not occur, the Church will be compelled to re-adjust its exegesis, and to accept a less literal interpretation; to substitute an equicalent event for the form of the fulfillment which has been previously cherished in idea. There need be no greater difficulty in this than in previous adjustments which the unfolding of events has enforced, by a rigorous necessity, on the Church. The Old, or Roman Catholic Church can only keep good its record by accepting the New Order as the Logical Continuation of its own History; and Protestantism means nothing but chaos, anless it be the attainment of some higher ground of Unity through the incerse process of dissent (c. 9, t. 136). But, understood in the light of this New Intellectual Order of Truths, the Old Catholic Church appears as the Centering Stem of Unity in the midst of the foliage and branching of the great Protestant Divergency. The Numerous Sects of Protestantism are then the Leaves, and Twigs, and Branches of the same Tree, striving to ignore the Stem, which is alike anxious to be freed from all Connection with them. Christendom is hence a house divided against itself, and in its present state it cannot stand. The New Catholic Church recognizes and combines the two Sides of the Complex Truth : the Unity and the Variety in Univariety. It extends the scope of its acceptance from the blackened root in the Precious Divergency of Heathenism, to the latest tendrils and Extremitics of the Limbs in Modern Radicalism, and assumes to carry forword the Culture of the Whote to the fullness of fmitage, through the Reconciliation, or the Mutual Understanding and Acceptance of All. It is in a new sense the "Broad Church," and also the High and the Deep Church, which establishes and defends the Inmerext Conplexity of Treth, and forever excludes the puerile Conception of its Smpplicity, eacept as one Note in the Variety, one Phase of the Complexity itself. The Truth of Idea, and hence of Doctrine, is precisely as many-sided as Truth
elsewhere ; the Completion, in this age, of the toilsome researches of Physical Geography which have busied the world for thousands of years; the Simultaneous Completion of the Criticism of all the Doctrines and Institutions of the Past ; the Triumph of Freedom, Education, and Religion in the issue of the Great American War, and the definitive Intervention of the "American Idea" in the affairs of the World, marrying

Actualized in the Concrete Universe, which it is the task of all Philosophy and all Science to unravel and comprehend. What place remains, then, for Dogmatic Assumption and the ex-cathedra Condemnation of Others?
10. To those who are skeptical of Prophecy altogether, as Philosophers and Scientists are apt to be, a word only can be addressed here. Science in its maturity will accept much which Science in its half-developed state has been prone to reject (c. 39, t. 136), but will accept it doubtless with some modification. At bottom, nothing is more unphilosophical than that Science should contest the possibility of foreknowing the Future. The essential element of Science itself is Pre-vision which is foreknowledge or prophecy. And if it be possible to foreknow definitively the precise event of an hour in the Future,-an eclipse, for instance, to occur many thousand years hence, by one faculty of the mind,-is it unreasonable to suppose that some other of our faculties may cognize more generally and vaguely the concrete form of future events, when perhaps those faculties are elevated into some ecstatic and abnormal state of lucidity? This question is wholly apart from that of the degree of authority or infallibility which attaches to this variety of pre-vision. If the seer avers, from within the charmed circle of his exalted state, that "he sees a panorama of future events spread out before his vision," and that "it is God who, by a direct interposition, enables him to see it," it would accord with the methods of Science to individualize the questions, and to ask, 1. Does he see what he professes to see? 2. If so, does the Vision really accord with any future series of events? and, 3. Does the testimony or the conviction of the seer to that effect sufficiently demonstrate the divine intervention; or may the Vision and the Prophecy be sufficiently accounted for upon simpler principles of interpretation. It was believed in one age, that the voice of God was heard in the thunder. Science now accepts the fact of thunder, but hears the voice of God in it no more than in any other of the sounds or noises of Nature. While Science disperses the prejudices of Superstition, it, as well as Superstition, has prejudices of its own to be overcome. There is a bigotry of learned infidelity which is, at best, only a little less dense than the bigotry of traditional and unreasoning pietism.

Commentary t. 431. 1. It is a leading thought with Hequembourg, that the Final Judgment is a process instituted and carried on by "The Saints," in the application of higher forms of truth to past and imperfect conditions. "In
the two Hemispheres ; the rapid Consolidation of Nationalities, as by the Growth of Russia, and other European Dominions, in Asia, and the extinction of the smaller States of Europe; the Planetary Abolition of Slavery; the War upon Intemperance and other Social Evils ; the Incipient and Progressive Emancipation of Woman ; the $A$ dvent of Modern Spiritism and Spiritualism, as indicative of the closer embrace of the two Worlds; the wonderful development of the Arts and Sciences; the belief in the fulfillment of Prophecy Converging upon this Period ; the Unification of Weights and Measures, Currency, etc., for the whole World, now taking place ; the New Universal Language undergoing Development; and, finally, and more than all, THE UNIFICATION OF HUMAN KNOWLEDGE through the Discovery of the Unity of the Sciences, together with the foreshadowing of a Pantarchal Régime, or Universal Spiritual Governafent for Maykind, and the Foundation of a Mediatorial Church, upon the basis of that Unity of Ideas ;-these are some of the indications, merely, that The Present is the birth of a Total New Order of Events on the Planet. (c. 6, t. 345).
433. I will restate the Analogies of the Three Stages of
another passage, the Saviour says, 'If any man hear my words, and believe not, I judge him not; for I came not to judge the world, but to save it. He that rejecteth me and receiveth not my words hath one that judgeth him; the Word that I have spoken, the same shall judge him in the last day.' (John xii. : 47, 48). The Saviour here quite consistently declares what his purpose was in coming to the world-it was to save it. Judgment or Condemnation was, thercfore, incidental. But the passage explains itself, and is very important in exlibiting to us the nature of judgment. The Saviour disavowed any purpose of judging the world in person ; and in fact he did not personally come, and never will. But he established and left a power of judgment in the world, and a judgment-seat. His Word, his People, and the Providence of Gout, will declare and execute all the purposes of judgment which he intended. He says, in the passage, that the Word which he has spoken will judge those who reject him. Both, also, in the Old and New Testaments, the Saints are represented as judying the World," etc. (1).

[^62]Pneumato-Cosmical Action with the Three Stages of Mentation involved in the enlarged Psychological Conception: I. The Primitive Heaven, into which the Ghosts or Spirits of dying men enter from Earth, and, casting off the body, proceed from finer to finer degrees of attenuation, (identifying now deeper degrees of Interiorization with higher Ascension). This is the Analogue of Impressional Perception, in which the Representative Films of External Objects enter the Mind, and gradually attenuate into Pure Ideas; II. The Transitional Heaven, in which the Central Energy, "The Lord," reacts upon the Primitive Heaven, bringing it into an Order preparatory to its final descent on earth. This is analogous with the reaction of the Self-Consciousness within the Mind upon the primitive ideas assembled there, classifying and arranging them by "a Final Judgment" preparatory to the reprojection of the whole Mind, through the Will, upon the World of Matter, in the Actions of the Man; III. The Ulteroror Heaven, or the Paradise Regained on Earth, through Art and the Artistic Rehabilitation of the Planet, as the perpetual and perfected Celestial Abode for the Human Race. This is the Analogue of the Expression of the Individual or of the Collective Human Mind,-first in Discourse as Prediction, and then in the Works of Human Creation, and in the Perfect Conduct of the Individual, and of the Collective Life of Man.
434. In a Secondary sense, Physiological Conception, with Gestation and Birth, is the Analogue of the same train of Events. The Compound World hitherto, including the Heavens and the Earth,-the Proto-Societismus in both Worlds,has been a foetus in process of growth and preparation for an Ulterior Life. The Spiritual Heavens of the Past were the Frotal Brain at rest, and being constituted from the Choicest Materials fed to it from without. The new energy and the premonitions of birth were the first half of the Transitional Epoch. The Hour of Birth is now. The severance of the umbilical cord, and the consignment of the Placenta,-the old

Mystical Ground of Life,-to dissolution and decay, is at the touch of Radical Scientific Surgery. The gasping incipiency of the life of the New-born Infant will fill the coming century. The External air will, from this instant, commence to inflate its lungs. Farther on in the future is the robust development of Luminous ages. Humanity, as the Grand Man, gets itself in this manner ultimately constituted. The Normal Progress of Development is not in the direction of Death, -except as an initial and preparatory recoil,-but in the direction of Life; not towards Interiors, but towards Exteriors and the Objectification of Ideals in the Actual Creations of this World of Ultimation and Power. A Grand Terminal Conversion into Opposites of the whole drift of Human Aspiration and Faith, away from the Old Heaven and Earth, towards the bright Acclivities of its own Earthly Celestial Destiny, will mark the Advent of the New Order. c. 1-5.

Commentary f. 434. 1. It is the peculiarity of this view, that Death, like Disease, of which it is the fruit and culmination, is held to be a falling awoy from the Normal Design of Being; which Design was, and is, at least a Quast-perpetual life in the body; for, while Life and Death have, in the Absolute, an Equivalence as Elements (t. 412), the practical triumph of Life over Death by the principle of Preponderance, in the Relative or Actual, is precisely that which God or Nature is striving to realize in Man. It follows, therefore, that Man, in his Normal Perfection, is more than a "Spirit," inasmuch as he is Spirit and Body,-The Body not an Encumbrance, according to traditional repute, but the Spiritualized Attendant, the Perfected Servant of the wants of the Soul. Hence, Anthropology is placed above Pneumatology in the Typical Table (t. 40); although still there is a sense in which the order is reversed, as, in a sense, the Air or Atmosphere is Above Man's position in Nature, while it is jet bencath him along with the Earth, also.
2. Except for the reserve which I wish to impose upon myself in respect to the utterance of mere Opinions or Articles of Faith in a Preliminary Scientific Basis, I should speak here more specifically of the possible and probable return of Individual Spirits into the Earth-Life during the present and coming Crisis; of the higher Spiritualization of those who will remain in the body; and of the germination from these two sources of a New and Superior-that is to say, of the Normal-Humanity, on the Planet. I will only so far transgress the limits of Formal Scientism, as to say, that some have died whom I should not be surprised to greet again in material bodies of a superior mould; and that, as for those now here, I believe Deatll is not (practically) the perpetual necessity it is
435. Transcendentalism in "The Psychological Conception" of Philosophy echoes to and Repeats Idealism in "The Cosmical Conception ;" and Experientialism repeats in like manner Materialism. c. 1. All the other forms of the Cosmical
supposed to be. For those,-few, it may be, who shall be willing to come into the Knorledge of All Truth, and to serve it with unswerving fidelity and derotion and the full consecration of all they have and are, in this Crisis-Age of the Worl i's Destiny, I believe, that the curse of death may be averted; such exemption beginning from the time when the requisite material and spiritual conditions can be combined at a focus of true Social Organization. Nor is this opinion, notwithstanding I hare chosen to offer it in that form, a mere opinion, unsustained by the inferences of Science. These I am unable at present, howerer, for lack of space, to expound. The subject will come up again, from time to time, in my subsequent rritings, as a part of the Gospel of this Hour.
3. To facilitate the discussion of this subject, I have adopted a few technicalities, which may be introduced here. The Surviving Film or Ghost after any death of the Esternal Gross Body, whether of a Man, of an Idea on Entering the Mind, or of Any Thing else Analogous, I denominate a Persistent RembiniDER. Assuming, then, the possibility that this Film should re-assume to itself a new accession of more solid materials, and so recover a Body, this process of virtual Resurrection I denominate The Refabilitation of Persistent Rematnders.
4. The suggestion of such a Cbange in Human Destiny arouses at once a thousand dificulties and objections, Physiological, Psychological and Anilogical, and may seem doubtless to be the rery meakness of credulity. I content myself for the present with having propounded the subject. There will be ample time and occasion hereafter for considering the objections.

ј. Mr. Hewitt, a gentleman subsequently mentioned in connection with ideas supposed to be derived from the Spirits (c. 1, t. 453), has been earnestly predieting for sereral years a "Great Crisis" in the affairs of this world, to occur near to this time ; to extend from Man to the Plysical Constitution of the Planet; annealing it, as it were, and changing essentiall! the character of the Earth itself, its Soils and Atmospheres, and fitting it to be the residence of a higher or more Spiritualized Order of Beings; while at the same time the change is to be fatal to the inferior orders of animals and men. Fourier believed in the early happening of New Creations on the Planet, to occur just when the World of Men should commence definitively the Reign of Harmony. Cantagrel announces that the World is organizing, in Humanity, a World-Soul, which is, when organized, to assume the same full control over the Earth-Ball itself which the Individual Man wields over his Body. Analogy seems indeed to point to Synchronous changes in the Subjective and the Objective World. In accordance with the General Principle of Universology upon the subject, these impressions, becoming so prevalent, mean something; how literally they are destined to be fulfilled it is unnecessary now to attempt to prognosticate.

Commentary t. 435. 1. The Analogies here adduced, both Psychological

Conception have, likewise, echoes to themselves here; but space forbids any farther expansion of the subject.
436. We pass now to the consideration of "The Ontological Faith." Here, as in the preceding case, the sphere of our observation must be greatly enlarged. By Ontological Faith, (1.0) $3^{\text {rd }}$, in Philosophy, opposed, as the Lowest, to Anthropology, (1.2) $3^{\text {rd }}$, in Science, as the Highest Domain, is now to be understood far more than has heretofore been intended in Philosophy ; far more than Faith in respect to The Absolute, transcendentally conceived of, as the Substrate of Being. Placing our backs against this dead Limit of Mental Impossi-bility,-whether as the Noumenon of Philosophy, or The Unrevealed God of Theology,-in either case the Great Unknown, -with the tacit acceptance that we yield to our own Identity and Self-Consciousness; with the implicit Faith and Trust which men give to Foundations and Backgrounds; affirming, cherishing, and relying upon, while yet ceasing mainly to regard them, we direct our vital and working Faith outwardly and forward upon Humanity and The Future of the Race here on Eartif. We turn our faces westward; no longer to the East. Our faith is in the Possibilities of Accomplishment. We worship God as revealed, and to be revealed, IN HIS Woriss ; as incarnated, and to be incarnated, in Man. We open our eyes upon the light at the same instant that our lungs are filled. We find ourselves in a New Worid. We venture to begin to say, within definite limits, "I know," in the place of "Credo," the fitting utterance of the Preparatory or Incipient Career of Mankind (t. 20).
and Physiological, are only proximately correct. I present them for the present as they will be most popularly and readily understnod. The real nature of the relations involved is more complex, and must arrait a more detailed and exact exposition elsewhere. The double action of the two Hemispheres of the Brain is involved. The first apparent relationship of the tro Worlds, as to relatire Superiority and Inferiority, and Male and Female Function, will be subject to various modifications, partial reversals, and other adjustments, which it is impracticable to introduce now.
437. And yet, we too have our Creed. We believe in All that has ever been believed in, in the Past; revised, clarified, systematized, by the Light of Knowledge ; and we add to this the whole immense Chapter of Possibilities, Capabilities, and necessary Actualities in the Future, already irradiated and made glorious by the prophetic endowment of Science. The Conduct of All Humanity in the Infinite Ages hereafter is the Arena of our Faith. The whole of what has been and is, together with the Teleological Necessity, and the Realizations to ensue, are The Absolute of Integralism. Ethics, Politics, and Sociology loom up in this Domain; Religion translated into Life ; the Millennium inaugurated through Science; the Solidarity and Coherence of the Universe in Space, and its unbroken Continuity of Dependence in Time, vindicated and clearly comprehended. c. 1, 2.
438. We arrive at this immense Subject, only, for the present, to dismiss it. It is that for which the whole of this treatise is, in a sense, merely an Introduction; but it is too extensive to admit of furnishing more than its Prime Divisions in this already overcrowded chapter. It covers the ground, and more than the ground intended by Hegel by the term "Mind"-after "Logic" and "Nature,"-coupled with all

Commentary t. 43\%. 1. The prolonged and agonizing Stmugle after a merely sentimental and ideal Unity with God, which has been the life of the Religious World in the Past, must virtually cease, for all Progressed and Superior Natures, at some time; and when so appropriately as at the instant when the identically parallel Struggle of the Scientific World after Unity of Lavo and System in the Universe comes to an end, through the discovery and realization, for those who are prepared to understand it, of more than all that was consciously hoped for? While the struggle exists, it is the confession, in either case, that no such Unity has been as yet attained to. When Unity with God is reached and realized in the sense that the Soul rests in it as calmly as in its own Selfconscious Existence, the Manifestation of Effort in that direction will terminate. Men will pray less; but they will labor more earnestly, as well as more intelligently, to actualize divine purposes or ends, in all Spheres; to inaugurate and maintain the high and completed forms of life,-material, moral, and social. Prayer, or the petitions of helplessness, pertain, in preponderance, to the Infantoid, and earnest labor, in preponderance to the Adultoid Age of Develop-
that Fourier means by "The Social Destiny of Man." The following Table, exhibiting the Natural Affinities of the first branchings of Ontological Faith with the Several Drifts of Pneumato-Cosmical Development previously sketched, must conclude the Subject:-

## TABLE 31.

Ontological Faith $(1,0) 3^{\text {rd. }}$
3. The Integral Ontological Fitith.
2. Tite Universological Ontological Faitif.

1. Tife Theologica-Metaphysical Ontological Faith.

$$
\left.(1,0) 3^{\mathrm{rd}}\right) 3^{\mathrm{rd}} .
$$

$\left.(1,0) 3^{\text {rd }}\right) 2^{\text {nd }}$.
$\left.(1.0) 3^{\text {rd }}\right)^{\text {lt }}$.

Pneumato-Cosmology (1.0) ( $\left.\mathbf{2}^{\text {nd }}\right)$.
Ulterior Reaction. ' $3^{\text {rd }}$ Drift. Final External Order.

Reversal. 2 ${ }^{\text {nd-ry }}$ Drift. "Final Judgment in Spirit-W orld."

Primitive Drift. The Old Heavens and Hells (and Earth).
$(1.0) 2^{\text {nd }}\left(3^{\text {rd }}\right)$.
$(1.0) 2^{\text {nd }}\left(2^{\text {nd }}\right)$.
$(1,0) 2^{\text {nd }}\left(1^{5 t}\right)$.
439. We pass now to the consideration of Ontology itself, the Science which discriminates The Absolute, The Infinite, and The Ecstatic. This is not the basilar Antithesis of Anthro-
ment. Some Ages, some Nations, and some Individuals are belono, others are upon a level with, and others again are, or will be, above, the felt necessity, for instituted or habitual prayer, as an expresssion of the Soul's want.
2. With the averment in the preceding Paragraph boldly made, I nevertheless accept most heartily the sentiment contained in the following Extract from one of the most pious and devoted of authors: "Therefore let not the man who is so far mentalized that he catches these correlations [between the Spiritual and the Physical Nature of things] with less difficulty of analysis and synthesis, heedlessly destroy the useful forms by which his younger brother is ascending to the Light and Love and Actuation of the higher moral Life. They are the ladder br which he himself has ascended, yea, and has yet to ascend-only in other and higher forms." (1).
(1) The Living Forces of the Universe-Geo. W. Thompson: p.
pology (1.2) $3^{\text {rd }}$, the Crowning Science of Specialogy ; that is, as we have just seen, The Ontological Faith $(1.0) 3^{\text {rd }}$. It is, on the contrary, in a sense, the still more basilar Antithesis of the, in a sense, still more crowning department of Echosophy which we now know as Generalogy or Natural Philosophy. It is therefore $\alpha \infty$, as contrasted with $\pm$. This is, however, pre-eminently the Supreme Department of Naturo-Metaphysic ; while it is Unismal, as contrasted with Speculology (1.0), which is Duismal; and while, in the Echosophismus, on the contrary, it is Specialogy, Duismal, which, on the whole, predominates over Generalogy, which is Unismal ; for, by a certain Loyalty to the Dominant Principle of each Domain, it is that which Accords with Unity which takes the lead in Philosophy, as it is that which Accords with Duality which does so in Science. Philosophy is Generalizing, and Science Specializing. Generality by its drift towards Totality or Wholeness, is Unismal,-inasmuch as the Integer (or Whole) is a Unit; and Speciality, by its drift towards Partism, and thence to Particulism, (Little-, or Least-Partism), is Duismal.
440. It should be observed, in explanation of the preceding paragraph, that the Clefs which consist of other signs than the Arabic Figures, as $\pm$, etc., are merely substitutes; and that the same Branches of Knowledge might, with a little less of abridgment merely, have been notated, by a different Adjustment, by the aid of Numbers alone ; thus, (1.2) 1 , in the place of $\pm ;(1.2) 2$ in the place of 1.2 , etc. It is in this sense that $\pm$ and as are Unismal ; 1.2 and 1.0 Duismal, etc.
441. Let us recur, in the first instance, more specifically to Natural Philosophy ( $\pm$ ) ; first, to indicate its primary Divis.ons, and then to compare it with the subject now to be brought under consideration ; for while as a Generalization of Echosophy, it belongs with Science ; yet by its character of Generality, it is still a Philosophy, and is better considered, in its details, at this point. A few Paragraphs must suffice.

It subdivides primarily, with reference to the Twofold Negative Continent of Being-Space and Time. Comte has fallen upon this ground of distribution. It has furnished to him the difference between the Static and the Dynamic (or Motic) portions of his Philosophy-or between the Theoretical and the Practical halves of the Subject, $\pm 1.2$, and $\pm 1^{\text {st }} \cdot 2^{\text {nd }}$. The $\pm$ then subdivides into the + , which is the Major Aspect of the Static-and-Motic Aspect, and is "The Objective Method" of Comte ; the -, which is the Minor Aspect, "The Subjective Method," and the $\doteq$, which may be assumed as the Generalized Aralogy between the Objective and Subjective Methods, from the similarity of Law empirically obscrved as existing between them. (t. 443, 444).
442. The + and - signs combined with the Number-Clefs, as +1 ., -1 , etc., denote that practical blending of Generalogical and Specialogical Considerations which almost always occurs in the treatment of any of the Sciences. NaturoMetaphysical Principles, ( $\mathbf{1}$; 0), also glide, unobserved, into the treatment of subjects professedly scientific-a fact signalized, exposed, and much inveighed against by the author of Positivism.
443. In respect to the Generalized Analogy between the Objective and the Subjective Methods in Natural Philosophy, (the Study of the Universe from the World to Man, and from Man to the World, respectively), which Generalized Analogy is the Central and Unifying Domain of Generalogy, Comte, who has, as it were, created this whole Science or Philosophy $\pm$, commenced before his death a Third Great Elaboration which was in part to cover this precise ground, though not so definitely as it might have been made to do. This final work he denominated The Subjective Synthesis, and defined it as The Universal System of Conceptions proper to the Normal State of Humanity. These were, of course, deduced A Posteriori, and stand accordingly contrasted with The Universal System of the Necessary and Universal Conceptions
of the Human Mind, to determine which, by A Priori investigation, has been the perpetual effort of Philosophy properly so called, $\mathbf{1}$; 0.
444. More strictly speaking, both Naturo-Metaphysic, $1 ; 0$, and Natural Philosophy, $\pm$, have each an A Priori and an A Posteriori. Let A Priori Method be symbolized by a Procedure downward from the Head to the Trunk and Feet of the Human Body; and A Posteriori Method by the opposite Procedure, upward from the Feet to the Head. The Method of the Metaphysician is The A Priori Procedure FIRst, followed by a Reversed Procedure dependent upon it, which, in respect to order, is then $A$ Posteriori; while the Method of the Positivist or Natural Philosopher is The A Posteriori Procedure first, followed by a Reversed Procedure dependent upon it, which, in respect to Order, is then A Priori. But in the matter of the Metaphysics, the two Drifts are not so distinctly pronounced. It is only in the case of Fichte and Hegel that the effort to return from the External World to the First Principles sought to be established in the Metaphysic is formally made. In the Great Mass of Metaphysical Philosophy, the whole Procedure is A Priori, and from The Absolute to The Infinite, or from Absolute Unity (Unism), to Absolute Variety or Multifariousness (Duism) (a. 25, t. 267), as will elsewhere be shown. At a central point in this career, analogous with the locality of the Genitals in the Individual Human Body, occurs the Conjunctional Effect and Manifestation of the Principle which I denominate Ecstaticism, as the Third Term between The Absolute and the Infinite. Finally, it should be observed, in passing, that the Sciento-Philosophy of Universology and Integralism is the Identification, by a Closer Analysis and Comparison, of the Universal Principles of the Metaphysician and of the Positivist, respectively; and of the logical bases of $A$ Priori and $A$ Posteriori Methods, universally.
445. The striking and appropriate motto of this last great
work of M. Comte-The Subjective Synthesis-is this : Induction conducting to Deduction for the Sake of Construction; (Induire pour déduire à fin de construire). The work was planned to consist of three Parts (in four Volumes). These Parts were to have been, 1. The System of Positive Logic; 2. The System of Positive Morals; and, 3. The System of Positive Industry. Of these Parts, the great author, "founder of Positivism and of the Religion of Humanity," only lived to complete the first, The Positive System of Logic. His disciples in France propose, it is understood, to endearor to complete the two remaining Parts, as well as may be done, from the indications and the spirit of his other works, and from their own understanding of the subjects involved. The meaning which he attaches to the term Logic is, of course, quite distinct from both Logic in its ordinary Scholastic Sense, (Catalogic), and Logic in the now well-known Universal Sense, as the Equivalent of Metaphysic, according to Hegel ; and equally different from the Special Scientific Analogic which is predominantly meant in the present work by this latter term. It is, on the contrary, what I have denominated it, Generalized Analogic, or the Appropriate (Logic as Universal Conceptions, and the) Analogic of Generalogy, which is the Generalized and somewhat Indeterminate Aspect of Echosophy. With the "Unirersal" Principles, (as the Three Laws of Physics, extended to Sociology, in the Politique Positive), abstracted, and dealt with in their rigorously Analogical aspect, it would hare constituted the real Nexus between his two former works.
446. Such is then the threefold Subdivision of Echosophic Generalization : 1. The Objective Method-TVorld-to-Man; Trunl-to-Head; 2. The Subjective Method-Man-to-World; -Head-to-Trunk; and, 3. The Connecting Logic of the former two, "The Subjective," properly the Intervening, Synthesis; The Intermediation between Man and World, as Logical Nexus ;-by Analogy, The Neck of the Individual Human Body. The Head, formerly presented as the type of Intelli-
gence (Dia. 2, t. 41) ; and then as that of Heaven ( $\frac{\mathrm{t}}{}$. 408), reappears here as the Analogue of Man, the Subject of Intelligence, and the Superior or Celestial Product of Being. The Neck, previously spoken of as the Analogue of the Intermediate Spirit-World between the Head (Heaven) Anthropoid, and the Trunk (Earth and Hell) Cosmoid, wasso, especially in respect to the Throat as Breathing and Swallowing Apparatus, representative of the Viscera ( t .408 ); here, it is so mainly in respect to the bony framework of the Cervis, representative of the entire skeleton, the more complete Analogue of Generalized Logic (t. 445).
447. Echoing to these Subdivisions is then the threefold Subdivision of Ontology abore alluded to. Herein, as seen by Tab. No. ' 32 are, 1. Absolutology, which is Objective, or related to the Universe as apart from God, and is hence Philosophical or Metaphysical, as contrasted with Theology; and 2. Infinitology, which is Subjective and Spiritual, and hence Theological, or associated especially with the Supreme Being. God is recognized at once, both in Theological and common phrase, as meant by The Infinite; while the phrase, The Absolute, carries the thought orer, just as naturally, to Metaphysics.
448. The Absolute 5 of Naturo-Metaphysic echoes therefore to Objective Generalogy +, The Universe to the World; and the Infinite $\propto$ to Subjective Generalogy-, or God to Man. Intermediate and $3^{\text {rd }}$, is $x$, The Ecstatic, echoing to $=$; or the Intermediation and Conjunction of The Infinite and The Absolute,-or of God and The Universe, or of Man as God and of Woman as the Universe (or TVorld), (t. 1065),-echoing to The Intermediation and Conjunction of Man as the Subjective World, to the Immediate Objective World as his Medium of Surroundings and Support or as the Matrix which contains him. So, tinally, by a similar Analogy, the Genitalia connecting the two Sexes, echo to the Throat and Neck connecting the: Head (Analogue again of Man) with the Trunk (Analogue of Woman) within the Indiridual Body. (t. 408). I have shown
elsewhere (1) that in the Neck and Throat are repeated all the Organs of Sexuality less specifically, and with a lower ecstasy of function ; and that Eating and Conversation, or Speaking and Hearing, are both analogous functions with Coition. c. 1-7.
449. The following extract from the Subjective Synthesis of Comte requires a word of Comment to bring it into harmony with what has here been said: "We ought normally to regard The First Philosophy and the Third Philosophy as the Neces. sary Types [Analogues] of Abstractness and Concreteness [respectively]; the former concerning the Entirety of Phenomena, and the latter concerning the Totality of Beings. Connected with both, so as to institute a Unity between them, The Second Philosophy participates simultaneously in their respective characters, the combination of which forms its own, according to the proportionate degrees of Proximity." (2).

45̃0. It might be supposed here that by "First Philosophy" is meant the same as by "Objective Method" ( $t .36$ ); by "Third Philosophy," the same as by "Subjective

Commentriry t. 44S. 1. It would appear from these Analogies that Religion, associated with God and Theology, is Masculine (The Male in the Conjunction), and that Philosophy, associated with The Universe and Mctaphysics, is Feminine (The Female in the Conjunction). So they are by Repetitive Analogy ( t .31 ) ; but tendentially it is the Opposite. It is the Male Type of Mind which devotes itself to Philosophy for the reason that it is intrinsically Feminine. and it is the Female Type of Mind which devotes itself to Religion, because it is intrinsically Masculine. In Manifestation, the case is therefore reversed, and Philosophy appears as Masculine, and Religion as Feminine.
2. But both the Philosophy and the Religion of the Past are merely Subdivisions of the Naturismus; and, hence, as a wohole, Feminoid and Infantoid (c. 24, t. 136), as contrasted with the Scientismus, and with Sciento-Philo-sophy-Masculoid. Instead of two Individuals of the Opposite Sex we have before us really, therefore, analogically, the two Side-halves of the Individual Female Borly enacting the part of, or echoing to, Separate Individuals-Male and Female. The Left Side,-The Heart, Affection (t. 42) stands now for Religion, and the Right Side,-Abstractness, Rectification, Lav-terminating in

Method" (t. 36) ; and by "Second Philosophy," the same as by the Nexus between these two, above alluded to, and now under consideration. Such is not, however, the author's meaning, but, as he explains elsewhere (1), by First Philosophy, he means a Body of "Universal" Abstract Principles which he has discovered (empirically) or adopted and codified, fifteen in number, their Type being The Immutability of Law; by Second Philosophy, he means another Series of Principles, less comprehensive and more numerous; General, merely, instead of Universal ; but still $A b s t r a c t$, the type of which is Gravitation; and by Third Philosophy he means, the Generalization of Concrete Science, in which he is unable to present either Universal or General Laws-the Laws therein being Special or Particular. The consideration of these Classes of Laws will be resumed elsewhere (t. 455). 451. The above exposition of $A$ Priori and $A$ Posteriori Method ( $\mathbf{t} .444$ ) exhibits the Human Head as the type of Man, and the Trunk-and-Limbs as the type of the World (446).

Action or Practical Philosophy, stands for Naturo-Metaphysic. These cohere at the Median Line, but are sufficiently cleft fundamentally to admit the penetration and disparting access of the true Masculine Principle ; that of thorough Scientic Analysis and Research. In this Congress is seated the inmost of all Principles, the Ecstaticism of Regenerative Being ; the Exquisiteness of Nascent Life itself.
3. There is a seeming Contradiction here of the Analogues previously stated ( t , 24), where Philosophy is made to echo repetitively to Matter, and tendentially to Mind, while Religion is the Analogue of Movement or Action (here assigned to the right hand, and associated with Philosophy). It is, however. merely a complexity and modification in the higher evolution. The Internal Action, visceral, is still the Heart-beat, associated with the Left Side, and so with Religion ; the External Action signified by the Right Hand is associated, first, with Rectification (Lat. Rectus, the Right Hand), the Attribute of Science (t. 519), and then with Externality, the Attribute of Matter (t. 86), and ultimately with Practice-and so with Phimosophy, as related in turn to all these.
4. The Progeny begotten by Scientism upon the body of Naturism is the New and Resplendent Naturism of Art, or the regenerate and newborn Uni-
(1) Synthèse Subjective, Vol. I. p. 14.

The entire body of the Universe resulting from the combination of these two factors, the Founder of Positivism then finds subdivided somewhat, I may add, as Language is divided into Parts of Speech, into Seven "Natural Categories," the domains of the Seven Grand Sciences which constitute his Ascending Scale or Hierarchy of the Sciences. These I have elsewhere exhibited in Diagram as a Pyramid, and they will often recur for consideration. Their names, and the order in which they arise, are the following: 1. Mathematics (1. The Calculus, 2. Geometry, 3. Mechanics) ; 2. Astronomy ; 3. Phystcs ; 4. Chemistry ; 5. Biology ; 6. Sociology ; and, 7. Ethics (La Morale). (t. 200).
452. I shall state here in brief, trusting in part to future exposition, and in part to the Obviousness of the Analogies themselves, when stated, in what manner this Grand Distribution of the Sciences stands related, corporeally; that is to say, with the Parts and Aspects of the Human Body. The Mathematics are the Analogue of the Limbs and their Conjunction
verse, predominating in Goodness, Truth, and Beauty, in every Sphere of Being. It should be repeated, that we are authorized by a Principle of our Science (c. 38,136 ) to identify successive Crisis-periods found in the Ordinary Evolution of Events in Time, as if they were one and the same event, in respect to the larger Ideal Evolution (Spaceoid); and hence, to speak of the Impending Crisis-Erent in Human Affairs, sometimes as a begetting, sometimes as a birth, sometimes as the period of dentition, and sometimes as an arriving at puberty or adult age. It is the Spirit of Decisive and Climacteric Transition which is meant.
5. Religion becomes identified abore with the Left. Side of the Body, and yet the Left Side tendentially with The Absolute as the Basis of Philosophy. This Absolute-Representative of Wholeness-is the Median Line, torcards which the Leff Side convolves; while from that Line, as its Base, the Right Hand, outstretched, withdraws in its reach after Relation or Something other. In this manner the Left Side (Free or Left, Lat. Absolutus, Free) becomes consociated with The Absolute, and the Right Hand with Tife Relative; the Left repeating the Back, and the Right the Front or Face. Absolutism is the recognized characteristic of The East, or of Asia, and of Antiquity ; and Relatirism (or Relativity, the Modern Scientific Spirit) that of the West, or of Europa (and America), and so again of Modern Times and the Future.
with the Body; thus: Arithmetic of the Extremities, the Fingers and Toes; Algebra of the Equation of the Limbs and Extremities upon the two Sides of the Body; the Differential and Integral Calculus of the Diverse Branchiness of the Limbs and of the Integrative Mass of the Body, respectively; repeating Divergent and Convergent IndividualITy as Abstract Principles illustrated in Tab. 2, t. 41; and the Calculus of Variations of the Suppleness and Gesticulation of the Body. The Ten Fingers are the Basis of all Count and so, as it were, of all Number. The Figures, representing Numbers, are called Digits, from the Latin Digiti, Fingers. Two-sided Equality is the basic idea of Algebra, of Analogic, and more radically of All Science; Difference and Integration relate to the Parts and the Whole. Geometry is the Analogue of the Limbs, as such, between the Trunk and the Extremities,
6. The grandly conceived Philosophy of Hoëné Wronski attempts to intervene reconciliatively between these two Standing-points and Drifts. He is the author of Messianism, of The Absolute Reform of Human Knowledge, and of other numerous and very remarkable works, only not estimated because they are not extensively known. He is a man who, like Comte, combines an extraordinary scientific endowment with complete devotion to the ulterior and supreme elevation of man, while more imbued with the spirit of the older religious sentiment of the Christian World. He has put forth, as the Basis of his system, the Conception that the Civilization of Asia, Absolutoid and Intuitional in character, and the Civilization of Europe, Relativoid, Skeptical, and Purely Intellectual, have come to a dead lock, or rather to a total divergency in their several careers of mental progress, and that neither is now competent to raise the world to a higher plane of Development. In this dilcmma he appeals to, and foresees, the Providential intervention of the Sclavic Nations, as a New People lying, geographically, between Asia and Europe, having as jet their Philosophical Conceptions to evolve. These will naturally tend to partake of the character of both the other systems, while yet, as he believes, to rise higher than either. It is this Ideal Mission struggling somewhat blindly to realize itself, and not any merely Political strife for ascendency, which he regards as the meaning of Pansclavism. He too (c. 1, t. 430) has forgotten America, a still Newer People than the Sclaves; and has not seen so clearly as he should that it is by an ultradevelopment of the Pure Intellect, symbolized by the still farther Western Longitude of this Continent that the race will begin to return to the Absolute Convictions and Deep Intuitions of the East and the Early Ages; that, in fine, the Cosmical Wave of Emigration and of Idcal Evolution is destined to go
or of the Extremities as Limbs. The Units of Measurement take their names from these parts of the body, as the Ell (cif. elbow), the Span (or reach of the arms), the Foot, Inch (Fr. pouce, the Thumb), etc. The Limbs are the Diametrids of the Body, and so, analogous with the Standards and Bases of all Geometrical Construction (c. 7, t. 43). Finally, Mechanics has for its Analogue the Compagination of the Parts of the Body as Parts of a Machine, or the Constituents of One Total Mechanismus moved by forces from the Vital Centres.
453. Astronomy is analogous with the Whole Body externally viewed. The Head and Brow, in another sense representing Man (Male), now represents the Sun as a God in Heaven, a Male Figure ; the Trunk then represents the MotherEarth, and is also representative of Woman ( $\mathbf{t} .448$ ). c. 1-10.
round the Globe, rather than to revert or become stationary at any middle position. Still, while this is the truth of the subject, in preponderance, as I think, I recognize that, co-existently, the rising wave has its immense refluxional current, represented by the Russian Empire and the other Sclavic people, and that there is hence a genuine inspiration in the Conception of Wronski. The Entente Cordiale which has spontaneously arisen between Russia, the Most Absolutoid (Arbitrismal), and The United States, the Most Relatoid (or Logicismal) Nations of Christendom, may have in it an occult significance the grandeur of which the Future alone can develop. Their divergency should embrace, as Pivot of Unity, the Pantarchal or Spiritual Government, Interventional, Voluntary, or Self-authorized, and functionating predominantly in the discovery and promulgation of Sciento-Philosophical, and -Political Laws.
7. The yawning schism heretofore extant between Arbitrism and Logicism, the Spirit of the East and the Spirit of the West, so healed intellectually, or in Principle, as it now tends to be sympathetically and instinctively, between the two Youngest and Greatest of Nations, would readily be healed by that influence, and other co-operative tendencies between the Older Branches of the Planetary Commonwealth; between Asia and Europe; and between the Catholic and Protestant Factions in the bosom of Europe herself. Let Russia and America consent and unite to govern by the Force of Ideas demonstrating the Co-operative Unity and Potency of Opposite Principles and Systems, subordinating the ambition of merely territorial and material aggrandizement, and the way is broadly open to the disarming of Europe, to the immense and rapid development of Industry and Learning, to the Conquest of Prejudice and Selfishness in the World, and to the rapid and early realization of all high ideals.

Commentar! t. 45.3. 1. Simon C. Hewitt, formerly from Boston, now, I believe, residing in one of the Western States, was a distinguished pioneer in

Physios corresponds with, and echoes to, the Aspects, Reflects, Faces, or Facets of the Body, and hence to its Form as abstracted from its Substance ; Chemistry holds the same relation to the Substance of the Body abstracted from its Form. Brology-consisting of Vegetalogy and Animalogy,-echoes to the Vegetative and Animal Physiological Systems within the Body, respectively,-they having again their Respective Centres, in the Trunk for the Vegetative, and in the Head for the Animal. • Sociology corresponds with the Separate Guilds or Local Centres and Systems dependent on them, consociated in the Unity and Co-operative Harmony of the Whole ; from the Grand Nerve- and Blood-Centres and -Systems down to the System involved in the Constitution of the Single Primitive Cell. And, finally, Morals, the Science of Posture relatively to others, is analogous with the Abstract Lines of Direction which regulate the Body with reference to its Normal Uprightness of Position, and its Various Inclinations and
the Spiritist Literature and Experiences of the last few years, and connected especially with that branch of the Movement known as "The Practical Spiritualists," of whom John M. Spear has been the leading medium,-a sect of Spiritists strongly tending towards Socialism. Mr. Hewitt exhibited, at one time, the model of a new order of architecture for a Unitary Home, the plan and principles of which were, as he claimed and doubtless believed, communicated to him through impression, by the Spirits. The Edifice embodied in a surprising degree the idea of the Female Body,-the Home regarded, seemingly, as a Matrix protecting and accommodating its inhabitants. There was quite obviously presented in the architecture a woman seated upon an eminence. The Outline was moulded or modified artistically so as to differ entirely in that respect from the Temple of the Sciences ideally suggested in this work, which deals almost exclusively in Straight Lines and Severe Angles; in other respects, however, there was a striking resemblance. (c. 5, t. 434).
2. The Dome and Parts above answered to the Head; the Entablature to the Neck, and the Upper Story (of three) to the region of the Breasts. In front of this upper portion of the Trunk were two detached balconies artistically rounded below and in the form of their covering above, so as to suggest the Mammx. The Wings of the Edifice answered to the Arms, as the wings of birds are the recognized Homologues of the Superior or Anterior Extremities of Mammals however modified. The middle region was the Abdomen and the Lower Story or Basement was the Pelvis. The Interior Arrangements of the

Declinations. It should be added that Theology has for its Analogue the Centering Point above the Head to which the Unitary Uprising of the Body conveys or points, and to which it defers,-or such other Teleological Point as may prove to be most commanding.
454. We return now to the Consideration of the nexus between the Head and Trunk, to which I have assigned the Clef $=$, which is the well-known Sign of Algebraic Equation. Now, it is not the Neck, precisely, as nexus between Head and Trunk, but the Median Line down the Centre of the Head and Body, the nexus between the two Equal Sides, which is entitled to this sign, first as corresponding with Algebra specifically, and secondly, with The Algebraic Spirit of Pure Speculative Abstraction pointed out by, and especially distasteful to Comte. But, in the Neck, this Equation of the two Sides is brought to a Species of Focalization. It is there that the Nerve Lines from One Side of the Head cross to the Opposite

Apartments, relatively to their uses, conformed to these Analogies in a more or less perfect degree. The Roads ascending the Eminence on either side, and converging at the base of the building, indicated in vague outline the Lower Extremities. If nature is immodest, or if some of our prevailing ideas regard as immodest what she does not, the difficulty must be compromised as it best may. Nature, Science, and Art, all seem combined in making slight account of conventional pruderies of all sorts. The Figure or Symbol of the Human Body as a Temple of the Soul, or a Residence for Man, is not new, and was boldly employed by Jesus in one of his contests with the Jews. "Destroy this Temple," he said, "and in three days I will raise it up." (1). "But he spakic of the temple of his body." (2). So, in the Apocalypse, both Babylon, the Old and Evil City, and The New Jerusalem, the New and Beautiful Home of Humanity, are symbolized under the form of a Woman. The term "City" is there used for a Single Complex Edifice. This is shown by the cubic form of the Nery Jerusalem which is precisely applicable to the single residence, with its "Many Mansinns," but not at all so to the literal City as an aggregate of houses. (c. 54, t. 198, 1015).
3. Without further observing the differences between the two models (the Artistic and the Scientic), a few additional remarks are in place upon the general Subject. The Neck has been specified in the Text (t. 408) as the region
(1) John ii. : 19.
(2) Ib., F .21.

Side of the Trunk, and so inversely. This is called Decussation; tying, as it were, the two sides of the body together. The Figure resulting is this:

Diagram No. 8.


This denotes a new Variety of Equation. It breaks into $>$ and $<$ which are the remaining Primitive Signs in Mathematics, and denote indeterminately declining and augmenting Ratio. The compound figure $\times$ denotes therefore equation between these two Varieties of Ratio. It is a special Variety of the Equation more generally signified by $=$, which properly denotes more radically the Universalized Conception of Equality, as
which coincides especially with the Intermediate Spirit-World. The Throat in addition to the Esophagous contains the Trachea or Windpipe (the Wind-, or Air-, or breathing-passage-way. This is the Stem of the Lungs-the Aerial or Pneumatoid region of the Body (t. 98). This region extends from the Nostrils to the Lungs, and includes centrally the Throat. But in this same region occurs, in striking predominance, The Hairy Development of the body. The Hair of the Head falls over and conceals the back of the Neck; and the Beard of the Male does the same, in front, in respect to the Throat. What do these facts signify? And what is the specific Symbolism of the Beard conferred upon one of the Sexes and denied to the other?
4. The Hair is the Analogue, within or upon the body, of the Shade or Shadow which falls backward from the Person, or from an Edifice, in the direction away from the Light, as from exposure to the Sun, for instance. In the Woman it is a Vail or Symbol of Concealment or Retiracy, and is significant of that characteristic in her. Shade implies the Radiation of Light, inversely, and the Chevelure (or Head of Hair) is, to use a bold figure, a fasciculus of the Rays of Shadow or Darkness. The general contrast of Light and Shade, as from the Objective Sun, affects the two Sexes equally, except that the Woman is immersed more deeply in the Shade, of which she is more predominantly representative.
lying at the basis of Algebra, Dialectic, Analogic, and so of Science universally, as its most radical Principle,-piroting on the Decussation which occurs, as it were, at The Punctum Vitce, in the Neck. (t. 1079).
455. The so-called Abstract Principles, The Observational Generalizations really, which constitute Natural Philosophy, or Generalogy, are collectively Analogous with the Skeleton of the Human Body, as will be shown more at large elsewhere. The Slieleton of the Man is the Abstract Man in this proximate sense, though still Concrete. (The Purely Abstract Human Body, the Analogue of another class of Analytical and Transcendental Generalizations, is the Body as sketched by Schemative Lines in Pure Space with no infilling: whatsoever, either of Flesh or Bone,-the System of Typical Plans, the Ideal Outlay of the Body, which Logically precedes it in Being). The Grand Group of Universal Abstract Principles (in this Modified Sense of Abstractness) which constitute the "First Philosophy" of Comte, and which affect ail the Sciences, or "apply equally to All Classes of Phenomena," have their Analogue in the Vertebral Column (or The Back-

Both have, therefore. Heads of Hair, falling in the same general direction, such being only somewhat more distinctive of the Female. I will assume here, for the present, trusting to prove it, to what will be incidentally adduced elsewhere, that the prevalent tendency of women to wearing the hair long, and that of men to wearing it short, is based upon true instincts in the several natures of the two Sexes, except a temporary reversal in transition periods, as now among "the Long-Haired Reformers" (Men), and "the Short-Haired Women Reformers," who are developing in themselves, for good uses, some of the qualities of the opposite sex. I will assume, upon the same terms, that length of hair, (as traditionally in the case of Samson), is related to, and coincident with, some variety of Strength, physical, or mental, or both, endosmosed through these capillary tubes, from Nature at large; and finally, that among the forces so symbolized and aided is that of Native, or Sensational Intuition, a faculty of Knowing, in which woman is superior to man to a degree which compensates remarkably for the superiority of the man in Pure Intellect, the penetrating power of abstruse scientific discovery, now about to be signalized.
5. It has been noticed above that the ordinary Head of Hair endows equally

Bone proper). They constitute, in other words, The BackBone of the Total Constitution of Being. The Pelvis is the Something-, (Ground or Basis), and the Skull the NothingDomain, (the Counter, Negative, or Logical Ground), of the Abstractismus, - they two combining to represent Space (the Firmament beneath and the Arch overhead), hence one of the Two Abstract and Negative Continents of Being. The Concatenated Vertebræ, (Separate Bones of the Back), of the True Vertebral Column are then the Analogue of Trire, the remaining one of these Two Abstract Negative Continents. The Particular or Individual Bones of this Column, in addition to Periods in the Succession of Time, denote The Individual Universal Abstract Principles of the Örder empirically or discursively discovered or formulized .by Comte-constituting his "First Philosophy." These he has found only to the number of 15 ; they should and will be, when fully discovered and formulized, 24; the number of the Human Vertebræ; 8 groups of 3 , instead of 5 (1), at which he has given over the pursuit. The Four and Twenty Elders seen in vision by
the two Sexes, saving this tendency in the Female to preserve it in its full native growth. But in respect to the Beard it is different. If in addition to the External or Objective Light, (the Outward Sun of Common and Natural Illumination), there were placed an Interior Lamp or Source of Light, a sort of Pharos, within The Tholus, or within the Head of the Image, surmounting an Edifice, it would cast an inverse shadow from the Swelling Centre of the Dome, interrupting its rays, which shadow would fall upon, and envelop, the lower portion of the Dome (analogous with the lover part of the face of a man). This shadow, contradicting the shadow from the External Sun, would then be the Analogue of the Beard of the Man. Nature so indicates, if I understand her language, that there is a sense in which the Male Intellect, the Light within the Brow, is original or Godlike, as that of the woman is not, in any thing like the same degree. If her mind is refulgent with reflected Intelligence, his mind is fulgent with con-genital and generative Illuminating Power. There is, by the Laws of Analogy, Sex of the Mind, no less than of the body, and of every parcel and atom of the whole being. The Purely Intellectual Mentality of the Woman is predominatively receptive and conceptive, gestative, amplifying,

[^63]John, seated, as it were, "round about the throne," (the Skull and its vital inhabitant, The Soul) are the Four and Twenty Universal Laws of Being of this Order : and numerically the seer was the more accurate of the two observers. These are Observationally or Empirically discovered Universal Principles, related to Time (Induction and Deduction, c. 1-9, t. 321; They are to be contrasted with another Series of such Principles (the Categories of Kant) related to Space, and with still another Series, Sciento-Philosophic, those announced especially in the present work, which Compass, as it were, the two Realms of Space and Time in the Unity of a Transcendental Relationship between them.
456. The remaining Small Bones of the Body, of The Face and Limbs especially, represent the Secondary Class of Principles discovered by Comte, constituting his "Second Philosophy." These are "also Abstract," that is to say, by Analogy, Pertaining to the Skeleton, and "more numerous," but local and special as affecting not "all Phenomena," but those respectively of "the 7 Categories of Nature, or the Domains
organizing as well as reproductive, and fostering of the Wisdom of the Man. The Male Intellect is, on the contrary, in like preponderance, discovering, penetrative of Causes, probing, experimental, crucial, and severe. All physical differences of the two sexes are either co-incidental with, or correlative to, corresponding psychological differences. Woman is the Analogue of Nature and The World; Man of Science and of Man (or Mankind), as Antithetical to the World; the Coition and Coaction between the Sexes and the Reproduction thence, of Morement or Art, and of successive Creation as such (t. 136). Woman is predominantly Physiological ( Gr. Physis, Nature), and man Psychological (Psyche, Soul for Mind). Woman is psychologically the Satellite of man; man physiologically the Satellite of woman. As Principles represented, all Being is generated of then ; a constant succession of births and deaths; of the Arisings and Departings of the Universal Becoming (a. 31, t. 204).
6. Again, however, the Head coincides with the Abstract, and the Trunk with the Actual or Concrete. In the Abstract the tro Principles are carried absolutely asunder (saring by Inexpugnabmity, a mere exception); the Man has all the Beard and the Woman none (or nearly so). But, in the Concrete, or Actual, the equilibrium is restored. The hairy ornamentation of the body is more impartially distributed. Sex is everywhere; more distinct in the higher
of the Seven Grand Sciences singly (t. 457). Finally, The Principles of "The Concrete,"-"The Third Philosophy"which he could neither enumerate nor distinctly discover, are represented by, or have for their Analogues the still more Numerous and Indeterminate Distribution of Muscles, Nerves, Viscera, etc., which, as every Anatomist knows, it is especially difficult to classify.
457. Such are, by analogy, the Principles of Being, falling into these Three Classes, as they are observationally and inductively delivered by Comte, as derived from the Generalization of the External Facts of Science. Let us now consider the Categories of Kant, as Universal Principles of Mind, and thence of Being (t. 455), as derived from Logic or Direct Intellectual Analysis,-Subjective Investigation; (the anatomizing or cut-up of the Body primarily down the Median Line and crosswise at the Girdle). These Principles fall, in the first instance, into 4 Groups-of-Categories,-Quality,
trpes of Being ; more blended and obscure in the lower types; less distinct, theretore, in the Edifice than in the human body; still, however, analogically traceanle in the outline and distribution of the parts.
7. But it remains to be said that by the Principle of mere Preponderance (t. 526) the Woman is not wholly female, nor the Man wholly male. Each Sex has a wing which laps over upon the Opposite Character (c. 42, t. 136); so, also the Woman is not without a downy, pubescent beard, and some whole races of men are very slightly endowed in that respect. And, by so much as the Man excels the Woman in Projective Original and Impregnative Intellectual Power, the Analogue of Light, by so much (proportionally) does the Woman excel the Man in the tenderness and delicacy of Sensibility; the genial warmth which swells the breasts and rounds the figure,--the Analogue of the Heat which fosters and delights our bodies, and prepares our food. The extraordinary Original Fountain of Intellectual Light in the Brow of the Man is thus compensated by the Extraordinary Warmth of Sentiment in the Heart of the Woman. The discrimination above made between Physiological and Psychological (Mentological) Excellence is the most obvious and ready defense of the Male Sex against the forcible Physiological Argument of Mrs. Farnham for the Superiority of Woman. (1).

[^64]Quantity, Relation, and Modality (Tab. 8, t. 108). Each of these Kant subdivides into 3 simple Principles which are the Single Categories. The Subdivisions of Quantity are represented by One, Many, All. This, as the basis of Indeterminate Number, I have augmented to 5 , and represent them by One, Sone, Feit, Many, All (Dia. 5, t. 234 ; t. 333). Let us assume that each of the 4 Groups is capable, as by Analogy it should be, of a similar and equally appropriate augmentation, by increase of Speciality, and we have 4 Groups with 5 Subdivisions of each. The Analogy in the Body for this Distribution is found in The 4 Quarters of the Body (t. 308) extending into the 4 Limbs, and terminating in the Hands and Feet, with their respective Groups of 5 Fingers and Toes.
4558. The Two Feet are Quality and Quantity respectively, the bases Metaphysical and Mathematical, respectively, upon which the whole System of Truth and the whole Fabric of the
8. But, lest in this age of Special Sensitiveness on the subject, some individuals of the "Feminine Persuasion" should still object to a conclusion which affirms in any sense the Intellectual Supremacy of Man, let us see what Science, urged a step further, may enable us to do for them. If they will consent to sarrender the claim of Woman to be the Paragon of Physical Perfection, the other arm of the dilemma will then ssring round farorably to their side. Mr. John Frankenstein, an Artist and Art-Critic peculiarly endowed with insight into the more recondite constituents of Artistic Effects, affirms that the Lines of the Contour of the Male Figure have a higher quality of Gracefulness and Beauty than those of the Female Figure. If this be so, it is because of the greater Complexity of the Elements of the Curres,-an ulterior Exhibit, or a higher Potency, of the Hogarthian Principle of Beauty (t. 514), as contrasted witl che Simple Swelling Rotundities of the Feminine Form. In this secondary ar u ulterior sense there should then be, per contra, a corresponding refinement in the quality of the Female Intellect; a kind of Subtlety in which the Mind of the Woman excels that of the Man, even as an Apparatus of Intellect itself The Beard (as well as the Hair) has another function than that of mere orna-

[^65]Universe stand. Each member of the Upper two Groups, Relation and Modality, the Right and Left Hands, respectively, has, it will be noticed, a doubleness of Development, (Substance and Inherence, for example, Tab. 8, t. 108), which is wanting in respect to Quality and Quantity, the joint Pedestal of the Universe. This difference is analogous with the greater flexibility of the Hands, which can be folded in and out, as compared with the greater fixedness or rigidity of the Feet. A more extended effort would reveal the Corporeal Analogies of Universal Principles as conceived by Hegel, Spencer, and other Philosophers who have been less systematic and distinctive; an effort which must be for the present, however, pertermitted. All of these Distributions of the Abstract First Principles of Being, (with their indeterminate Addendum of Concrete Principles, or Principles of the Concrete), belong, when radically considered, as already stated, to what I have elsewhere characterized as Observational Generalizations (t. 1012). They are derived, in other words, from an investigation of the Body (of the Individual, or of Universal Being),
mentation. It gathers, contains, and transmits the Vital Magnetisms or Spiritual Forces of Nature. May not the diminutive Downy Beard upon the face of the Woman perform this service in a more attenuated, and yet, in some refined sense, in a more efficient way, than the more sturdy hirsuteness of the Male? If the appeal were from Science to Sense, few men whose lips have come in contact with the cheek of the woman they have loved would be inclined to doubt it. It is thus that the Dialectic of Ulterior and Still Ulterior Stages of Derelop-ment,-new waves in the Perpetual Flux of Principles in the Combination of their Activities,-brings first one and then the other member of any Antithesis uppermost or farthest forward,-suggesting the Precise Equality of the two Elements in the Absolute. Still, practically, or in respect to the Most Obvious and Prominent Aspect of Mental Organization and Action, the Verdict of Science remains unaltered, as it seems to me, that Man (Male) is, Psychologically, the Supreme and Governing Power, and that Woman is the Physiological Paragon.
9. In making an estimate of the relative worth or value of the two Sexes, the strength and quality of their faculty of Knowing is by no means all. There is ground for affirming, as our Science will elsewhere demonstrate: That the Woman has a Moral Function which gives to her another kind of Supremacy,
somewhat in the gross, (Fr. en gros). This statement applies with greater force to the Method of Comte, and less so, but still essentially to the Method of Kant. Neither begins in Radical Analysis, the Single Clean Cut, inclusively representative of the Whole Anatomy of the subject.
459. There remains to be noticed then, in direct contrast with this whole Combined Method of Comte-and-Kant, still another Method, and another Whole Assemblage of the First Principles of Being, thence derived, still more Radical and Fundamental, the working of which Method, and the collection of which Assemblage of Principles, belongs to the new kind of Philosophy herein elaborated, and which I have denominated Sciento-Philosophy. The Generalizations in question are, as also previously stated, what I have denominated Avalitical Generalizations ( $\mathbf{t}$. 1012). The Analogues in the Body for this new, and, for exact Scientific purposes, greatly more important, Class of Principles, are of three kinds : 1. Universaloid, 2. Generaloid, and 3. Specialoid. The Primitive and Universaloid form of Sciento-Philosophic Universal Principles corresponds with the Single and Primi-
under the head of Influence, over the Man. The True Woman has a power and a responsibility in elevating and maintaining the Moral Nature of Man at the Acme of his orn innate possibilities in that direction, which is wholly different from any influence, which in any similar degree, the Man is capable of, or called upon to exert, over the Woman. This fact was first confidently affirmed and urged upon my attention, out of the testimony of her own profound feminine intuition, by such a woman. The subsequent investigation of the proposition by the light of Universological Principles confirms the assumption.
10. The whole of this discussion has, however, occurred incidentally here. The point for which the Hair and Beard are now considered is to call attention to their Analogical Position and Relationship with the Intermediute Spiritual or Breathing Region of the Body-from the Nostrils to the Waist. They cover in this manner the Throat, Neck, Chest, and Lungs, and accord with them by a certain identity of Function. They float upon the same ocean of air, which, entering the Lungs, becomes Breath, and is extaled in Rays of Vapor which repeat the Hair. They symbolize Shade or Shadow; and the Ghosts in the Spirit-World are conceived of, and denominated "Shades" or "Shadows"-(the inhabitants of Hades, a word also etrmologically cognated with Shades).
tive Division of the whole Body, (Head and Trunk), at the Median Line, into the two Equal Side-Halves of the Body;-or rather with the Synstasis, Analysis, and Synthesis of the Body at that Central Line (t. 322). These are in turn the primitive Unism, Duism, and Trinism, as illustrated in the Constitution of the Body (Tab. 12, t. 211). This Lateral or Sidewise Distribution is Spaceoid (t. 386).
460. The Secondary and Generaloid illustration, in the Body, of this style of Universal Privciples is found in the Subdivisions of the Pelvis and Skull, the two Fundamenta of the Bony Framework, into the particular bones which compose them. The Pelvis is a Unoid ; or divides by Odd Numbers. It consists of 3 Aspects; $1^{\text {st }}$, of the Sacro-Coccygeal Col-umn-Unismal ; $2^{\text {nd }}$, of the 2 Coxal Bones (Ossa Innominata) -Duismal ; and, $3^{\text {rd }}$, of the Whole-Trinismal. The Unismal Base then divides by the higher Odd Numbers in Series, 3 bones in the Coccyx, and 5 in the Sacrum. The Skull is a Duoid ; or divides by Even Numbers. It has 8 bones, 8 being the $3^{\text {rd }}$ power of 2. It has adjunct to it in the bones of the Face, the double (equal) of the next higher and governing Odd Number, 7, -these bones being 14 in number. The Subdominant 2, Sacral, (even), in the Pelvis, and the Subdominant 7, (odd, though doubled), in the Skeleton of the head vindicate the Principle of Inexpugnability, -the Minor Presence of the Opposite Principle. This Distribution of Skull and Pelvis, as Ends of the Main Extension of the Body; successional or lengthwise, is Temporoid, within a Spacial Domain (t. 455).
461. The Tertial or Specialoid illustration, in the Body, of this style of Universal Princrples occurs in the Teeth and Nails, the Nude or Exposed, and highly finished or Enameled, Termini of the Bony Framework. These bone-like Extremities of the Extremities of the Body, converted, as it were, into the clearness of Crystal, symbolize a New and Important Kind of Universality and Representative Value, in respect to the whole system. We are in the presence here of a New Kind of GEN-
eralization passing up to Universality, while resulting, nevertheless, from carrying Speciality down to the Minutest Points of Particularity. This is then pre-eminently the domain of Avalytical Geveralization (t. 1012). At this point, analogically, The Definite Epitome of All Universal Princtples is found in the rigorous Analysis of any, the least Atom, of Matter, of Mind, or of Movement ; of the Minutest Thought or Thing even ; in accordance with the intuitive statement of Swedenborg, that "All things are contained in the least thing." There is, therefore, in what is analogous with this view, a Magnificent Termival Conversion into Opposites from Universal Laws gathered by commencing in General Observation and Encyclopedic Estimates, to Laws more Exact, more Obvious when pointed out, and equally, or, in another sense, more Absolutely Universal derived from the Analysis of any least Item of Being,-the paring of a finger-nail even. The basis is so laid for a new, distinct, and precise classification of all the Phenomena of the Universe, the understanding of which, instead of demanding an elaborate education in the Special Sciences, shall be itself the initiation and the instrument for the speedy accomplishment of that education. All this is analogous, again, with the use made by the Zoölogist of the Teeth and Nails (or Claws) in the Classification of the Animal Kingdom; reading by them alone the whole Physical Structure and the necessary habits of life of the Animal, whether the Species be living or extinct.
462. Unismr, Duism, and Trinism here re-appear at the outer Extremities of the Body, echoing in a Fuller Expression to their Primitive Occurrence at the Median Line (t. 459). The Bi-lateral Equation of the Limbs follows that of the two Halves of the Body. The Thumb, in the Constitution of the Hand, is a Unoid (single). (The Nail of the Thumb follows the Thumb, as the Analogue of Unism, the Abstract Principle, follows the Unit, as thing; and so of the Nails of the other Digital Extremities). The 4 Fingers of the Hand are a Duoid
$(2+2)$; and the whole Group of Fingers and Thumb is a Trinoid $(1+4)$. The Jaws are the Limbs of the Head. The Teeth repeat the Nails. (1). The Unism, Duism, and Trinism, is here carried out in higher Complexity, or in more elaborate Perfection. The Jaws are properly 4, not 2, as ordinarily reckoned. Each Jaw, (half-jaw), has 8 Teeth distributed into Classes, as follows: 1. Canine, equal to Thumb, a Unoid (Point) ; 2. Incisors (Edge, Line) +2 Bicuspids (Two-Points) $=4$, a Duoid (doubled) ; 3. Molars,-Grinders, Trinoid (Surface and Solidity). Fourier had a perception of some relation between this Distribution of the Teeth and a Governing Law of Distribution Universally. He insisted that the Number 32, that of all the Teeth in the Adult Jaws, is a Grand Governing Number in the Numerical Distributions of Being throughout the Universe. He made a similar use, in an obscure way, of the Numerical Distribution of the Ribs, 12 in Number on either side, with the Composition $7+5$, (the Long and Short Ribs respectively), relating it to the Diatonic Scale in Music (7), and the 5 Semi-tones.
463. This immense text, here crowded into a mere Synopsis in a few paragraphs, will require volumes and the combined labors of the University for many years fully to elucidate it. Reference is had for the present to other portions of this work; to "The Analogical Anatomy of the Head and Trunk"; and to the forthcoming "Exposition of the Apocalypse."
464. It is obvious that The First Cleavage of the Body into Halves ; The Two Abutments of the Trunk, (Pelvis and Skull) ; and the Least and Last Extremities, (the Teeth and Nails) ; the Analogues of the Three Stages of Sciento-Philosophy,Universaloid, Generaloid, and Specialoid,-constitute a Trigrade Series of Pivotal Positions; Incipient, Medial, and Final; holding, as it were, in Clamps or a Framework, all the other Parts and Aspects of the Skeleton (and Body), -

[^66]which have been assigned as the Analogues of "The Universal Principles" of the other Systems of Philosophy. In the same manner, the New Philosophy here adduced is more radical and comprehensive, embracing all other Systems, and bringing them into a Common Unity, while it is still, in itself, a new and distinct System, in addition, -as that which does so embrace and bind the parts of the other Systems into one.
465. Allusion has been made to the existence of a Subdominant Semi-Scientific Aspect of Naturo-Metaphysic, Counterparting the Naturo-Metaphysicoid Subordinate portion of Echosophy, (t. 340). This is imported from $\pm$, and is characteristic of Mill, Bain, and other stanch Echosophists, when they treat Metaphysics in the vein of Critical Science, or from the exterior point of riew of the Inductive Sciences. It may be notated thus, (1.0) (1.2). We are now prepared to return to the consideration of Ontology, the Corresponding Department of Naturo-Metaphysic.
466. Absolutology, the lowest branch of Ontology, $\infty$, echoes to "The Objective Method" in Generalogy, +, Comte's "Fundamental Elaboration;" Infinitology, the highest, $\propto$, to "The Subjective Method,"一, Comte's "Principal Elaboration" (t. 36) ; and, finally, Ecstatologr, the Middle Branch, $\propto$, to the Generalized Analogic between those two Methods, (t. 441), $=$; or thus:


These Gradations of Generalogy echo in turn to the fundamental or Spencerian Distribution of Specialogy (the principal domain of Echosophy); namely, to Clef 1, Clef 2, and Clef 3,
respectively. It is worthy of note, then, that contemporaneously with the announcement by Spencer of the true basis of the distribution of Ordinary Science, (the Scientic portion of the distribution of Cosmology, Typ. Tab. t. 40), the Frothinghams (of Boston) produce a remarkable Work, entitled Philosophy an Absolute Science, founded on the Universal Laws of Being, and including Ontology, Theology, and Psychology, made one, as Spirit, Soul, and Body. (1). Their positing of the Laws of Being, stripped of Amplification, and as I apprehend it, may be represented as follows:

$$
\text { TABLE } 33 .
$$

[Read from below upward.]
External or Phenomenal
Existence.
The Creation.
THE INFINITE,
Marriage, or Conjunction,
THE FINITE,

> THE ABSOLUTE, God, as Absolute Creating Cause.
467. God, as well as the External World, is here conceived of as a resultant Compound Existence, so to speak, from the Marriage of two Opposite Principles, The Infinite and the Finite. This is an Absolute allied with Ferrier's Trinismal Absolute, (a. 5, 26, t. 267). But it is more accurate, as Ferrier has shown, when expounding Pythagoras (a. 21, t. 204), to put THE Finiting-Principle, Peras or Limit, in the place of The Finite (The Limited), and then to Identify The Finite with (at least Phenomenal) Existence. On the other hand, Mr. Mill objects, rightly enough, to our substituting The Absolute, as Abstract, for God, as the Concrete Absolute Being. It is also certainly more in accordance with instinctual usage to associate The Finit-ing Limit with External Existence, and

[^67]hence with Science, and The Infinite with Subjective Ontology, and hence with The Absolute of Philosophy. Submitting to these Criticisms, and making the necessary Accommodations, it is as between the Infinite and the Absolute, the two Partners in "The Unconditioned" of Hamilton, that the really First Ontological Marriage takes place.
468. Marriage, or Espousals, and Conjunction, imply and correspond with Ecstaticism or the Ecstatic, "The Ineffiable" of Paul, and The Unspeakable, (Fr. "Indicible"), of Wronski, which I have placed between the Infinite and the Absolute in this recondite and Incomprehensible Domain. (t. 239). Of these it is now said that The Absolute, or The Metaphysical Substance, back of Phenomena, echoes, from the Domain of Philosophy, to the Abstract-Concrete Domain -Type, Chemistry-the Science, in fine, of Substance or Mass, in the Cosmical Scientific Domain ; that The Infinite, as the All-Differenced Opposite of Mere Mass, echoes to The Concrete or Corporeal, which is the Perfect or Ultimate Manifestation of Substance through Form (in Body or Bodies) ; and, finally, that the Ecstatic, the Realm of Espousals, Conjunction, Exquisiteness, and Creative Result in The Finite as Progeny, corresponds with Abstractology, the Conjunction-and-Transition-Point between the Unlimited Mass and the Limited Body ; the Inception of the Nascent State, or of the Process of Creation or Generation ; the Cleft or Crack, and the Blade or Line attendant or inserted. (c. 2, 4, t. 448).
469. The Clefs $x, x, \alpha$, stand in the place of ( $\infty \infty$ ) 1.2, that is to say, of the Cardinoid view of the subject. There remains an Ordinoid or Ascending Series, which is ( $\infty \infty$ ) (1.2) $1^{\text {st }} \cdot 2^{\text {nd }}$, the notation of which has to be written in full. We have here what corresponds to Cosmology, Pneumatology, and Anthropology, respectively (Typ. Tab. t. 40). These divisions of Philosophy I take to be, I. Pantheism (Cosmological) which upon its Negative Border terminates in Atheism (Non-theological and Anti-theological) ; II. Mysticism ; and,
III. Anthropo-Morphism, (the Doctrine of the Human Form, as impressed on All Things). The full justification of this Classification must be postponed to other occasions. The Parallelism betiween Philosophy and Science in this particular is exhibited in the following Table:

TABLE 34.

Philosophy 1:0.

| Anteropoyorphism | $\alpha \infty(1.2) 3^{\text {rd }}$. | Avthropology (1.2) $3^{\text {rd }}$. |
| :---: | :---: | :---: |
| Mrsticism | $\infty$ ( 1.2 ) $2^{\text {nd }}$. | Panematologi (1.2) ${ }^{\text {nd }}$. |
| Pantheism | $\infty \times 1$ (1, 2) $1^{\text {st }}$. | Cosmology (1.2) $1^{\text {st }}$. |

(ATHEISM) $\times 0$.
470. We have now concluded the Notation of Philosophy as heretofore understood in the World, or more specifically, of Naturo-Metaphysic. We come, in fine, to that of ScientoPhilosophy (1.1). Here, again, the subject for which all that has been said is merely a foundation, must be dismissed, for the present, with a slight notice. The whole of our present labor is, in a sense, merely a clearing of the ground for future construction. The New Philosophy now mentioned will be pre-eminently The Philosophy of the Future; but, at this point, I can do no more than to define its domain and the starting-point of its development.
471. In the preceding consideration of Naturo-Metaphysic on the one hand, and of Science on the other, it will now be observed, when attention is called to the fact, and by reference to the Numbers I., II., III., at the Left Margin of Tab. 18 (t. 347), that we have really passed directly upward from One to Three in respect to the Ideal and Analogical Basis of our System of Exposition, and that the consideration of the Intermediate Number, Two (analyzed into 1.1), has been virtually omitted. It is the same, Subdivisionally, within what is there
marked as III., that is to say, the $\mathbf{1 ; 0}$, the Clef of Philosophy in this Lower Sense is only equivalent to Unity in the Practical and Natural Sense in which the Mathematician would unhesitatingly write the equation $1+0=1$. The total Fractionismus of Number Counterparting the total External Numerismus, is contained within, as the Bowels of, this Single Positive Unit; the Zero being no more than the Unheeded Cavity, or Vacancy, which accommodates them there while it extends out and around. The Zero is therefore practically thrown aside from recognition, although it glides into Mathematical Calculation; and, Metaphysically, we have now taken the pains to restore it to a Quasi-Equality with the Unity.
472. For the present purpose, however, we may recur to the statement that the Naturo-Metaphysic is, virtually, represented by the Single Unit One; notwithstanding the more elaborated character of its ordinary Clef, $\mathbf{1 ; 0} \mathbf{0}$
473. On the other hand, the Domain of Science, or Echosophy, as hitherto developed in the world, and in the present treatise on the subject, elsewhere defined as Monospherology (Str. 0). having the Clef $1 ; 2$ figures throughout in the Spirit of the Number Tiree $(1+2=3)$, and centres upon Cosmical Concretology, with the Clef (3.) $1^{\text {st }}$.
474. There is, now, intermediate between these two Domains, a Middle Region, more Occult ; more Rational-Spiritual, and hence more Obscure, while yet intrinsically more Governing and Supreme in the whole realm of thought. This is that which has for its range of Existence all that echoes, in the same generalized sense, to the Number Two;-so founding a new Aspect of both Science and Philosophy, cognate with the Internal and External Constitution and Character of this Rational Governing or Head-Number, Two. c. 1.

Commentury t. 4\%4. Naturo-Science-and-Metaphysic, (Monospherolngy), piles up one Octave above another-to illustrate from Music-constituting the Total Key-board or Register. Sciento-Science-and-Philosophy, (Comparology) eliminates the Do or Re of every Octave, and identifies it with the Do or
475. By the constitution and character of the Number Two is meant especially its Composition from a Ove (1) and another One (1), together with the Interior Frame-work of ThoughtLines (of Difference and Union)-the true Mesothet between the two Units involved, by which they are constituted into the Sum which we name Two. It is just at this ultimate depth of Analysis that we arrive at a perception of the inherent Constitution of Number universally; and hence of Relation as the Grand Domain of Law throughout the Universe of Being. It is here that the Occult Presence of Fonn, (with its Elementary Constituency of Points and Lines), is revealed in the Interior of Number ; as, on the other hand, we are already aware that Number measures the Obvious Constituency of Form. (t. 258, c. 8, t. 143).
476. The Clef properly adapted, then, for the New Aspect of Number, and for the Universal Corresponding Relations of Being, extending through Philosophy and Science, is 1 ; 1. Of this Aspect of Twoness, the Internal Ideal Unity, that which makes of the two Ones the Sum which we call Two, is the Thought-Line (or System of Thought-Lines) between the Constituent Entities or Units. This splits into a Numerousness of Aspects, under Microscopic Intellectual Analysis, equivalent to All the Views which are possible of the Fundamental Laws of Bervg. This is, then, the Domain, par excellence, of "the Absolute Truth" of Ferrier, which alone addresses itself supremely to the Universal Faculty in Man, (The Duismal Absolute, a. 5, t. 267) ; that of the "Unmade Principles" and "Transcendental Science" of Hickok; and, lastly, of the Inherent Necessity of Hegelianism and of Universology. It is a region habitually overlooked by Naturalism, or mere Ob-

Re of every other Octave, so that the Whole of Music is treated of as if it were contained within a Single Octave; or, in other words, the Principles of Every Science are found contained in each Science, so that an entirely new distribution of the whole field-the Sciento-Philosophic, takes place, not relating to Domains, but to the Principles which pervade All Domains.
servational Inquiry, both in Philosophy and Science. It is "the stone rejected by the builders," but which is destined to be "the Head of the Corner." This New Sciento-Philosophy converts readily into Comparative Science, the nature and claims of which are somewhat extensively expounded in the last Chapter of the "Structural Outline." The following Table exhibits by the naked Clefs the relations of the Several Aspects of Science and Philosophy here brought into connection with each other.

TABLE 35.


Read for 1., Indeterymology, Chaotic; for II., Determinology; for III., Universology, which, as embracing its own Totality, and then the two Inferior Domains in a Compound Tri-Unity (III. + I. + II.) is the Philosophy of Integralism.
477. An instance is given of Sciento-Philosophic Distribution, though not brought under the Notation now indicated, in Text No. 248, where the Abstract-Concrete and the (Concrete-) Concrete of Spencer, Clefs (1.) and (3.), are brought together as constituting conjointly The Concrete $(1 ; 3)$ which is then contrasted with The Abstract (2;2); a Dual Arrangement which the popular instinct has long since adopted, in the place of a Trinal one, as more Fundamental and General than the Trinal Arrangement made basic by Spencer. It
amounts to Classing the two Odd Head-Numbers, One (1) and Three (3), together, on the Ground of their Common Character of Oddness, and opposing them to the remaining HeadNumber, Two (2), which represents Evenness, the Opposite Principle to this Oddness. Curiously enough, a most important Reversal then occurs; the Oddness, Primitively and Naturismally single or associated with One, is now, Secondarily and Scientismally, double in its mode of occurrence, (the 1 and the 3), and the Evenness, Primitively and Naturismally Dual, is now Secondarily and Scientismally Unismal, (2 as a single Sum) ; that is to say, we arrive here again at the Unity of Relation intervening between the Diversity of Entity in a way which repeats the Intervention of the Pure Thought-Line between the Units in the Composition of the Two. In other words again, Duism is the Scientific Unism, (the Monad of Thought, c. 8, t. 143), or the Primitive Cell and Foundation of Science in the Transcendental or Supreme Sense of the term. The Sciento-Philosophic Notation for the Abstract is then (1.1) 1 , and that for the Concrete (1.1)2; for their Composity (1.1) 3.
478. The Naturismal Order of Distribution springs at once from One (1) to Three (3), omitting the Two; and this is Characteristic of Observational, or Ordinary, Science and Philosophy. This Higher Scientismal Order of Distribution results from recovering the Two (2), and making it salient, as furnishing a higher Branching of Being and Knowing. This is characteristic of Sciento-Philosophy, and relates to Transcendental or Pure Science, to Comparology, in fine, the Governing Aspect of both Science and Metaphysic. To omit the distribution by Two, related to the Algebraic Equation, to Analogic and Dialectic, to the Primitive Division of the Human Body at the Median Line, and to Equality as the basic idea of All Science, is to ignore the Pure Canon of Criticrsm upon all our distributions furnished by The Necessary Evolution of the Cardinal Series of Numbers,-the heart
and core of Universology,-and to degrade all our Classifications into the rank, again, of mere Individual Observations and Preferences.
479. On the other hand, even in the Naturismal Distribution, there is a counterparting tendency on the part of Abstraction, (represented by Two), to split into a double Manifestation echoing to the Primitive Constituency of this Number from two Units, (giving first 2, then 4, and then 8 as opposed to the 1). This has been previously referred to in respect to the Differential and Integral Calculus, which, under a double designation, is still reckoned as a Single Calculus or Department of Mathematical Science ( $\mathbf{t} .281$ ).
480. Arto-Philosophy, (Artismology, or the Science of the Artismus), is, or rather is to be, the result of the Mutual action and reaction of Naturo-Science-and-Metaphysic, (Naturismology, Monospherology), and Sciento-Science-and-Metaphysic, (Scientismology, Comparology), blending into each other; with the Addition of that Freedom of the fancy which is characteristic of Art. The forthcoming Exposition of the Apocalypse is intended to be an illustration, in a degree, of this Order of Philosophic Writing ; with a Basis in the profoundest Scientific Aspect of things, but discursive and illustrative in method. Nature is in a Crude Synstatic Condition. Science sharply divides and unites, as illustrated by the meeting of the different colors of a checker-board. Art tones down the edges, obliterating and blending the trenchant differences of Science, and gracefully tends backward to the confusion of Nature, but without completely restoring it. (t. 259).
481. We turn for a moment more, in conclusion, to the Peculiar Character and Applications of Sciento-Philosophy. Let the One (1) represent any Object whatsoever, and the Zero (0) the surrounding Vacant Space, (or Sound and Silence, respectively, (Str. 0). The $\mathbf{0} ; \mathbf{1}=\mathbf{1} ; \mathbf{0}$ will then denote the equal Two-sidedness or Bi-lateral Symmetry of the Object; as of the Human Body, for instance ; together with the

Vacant Spaces which appear at the Right and Left, or on either side of the actual Object. (The Compound Clef $0 ; 1=$ $1 ; \mathbf{0}(1 ; 2)$ would then denote the Static Aspect of the case, while $0 ; 1=1 ; \mathbf{0}\left(1^{\text {st }} \cdot 2^{\text {nd }}\right.$. ) would put the subject in Motion, and suggest the Walk or Way of Practical Dialectic). (t. 383).
482. But $\mathbf{1}+\mathbf{0}=1$. If then we cancel the two Zeros, ( $\mathbf{t} .481$ ), we shall have remaining $\mathbf{1 ; 1}$ ( ( $\mathbf{1}=\mathbf{1}$ ), the Distinctive Clef of Sciento-Philosophy ( $\mathbf{t}$. 476). The 1 denoting the External Wholeness-Aspect of Being, $\mathbf{1 ; 1}$ denotes the two Halves of the Object, each severed from the other, and figuring AS a Whole ; as for instance, the two Side-halves of an animal carcass, or of a human body, partly sundered by the surgeon, in the first and fundamental step of Dissection. This Clef 1 ; 1 has, therefore, as its legitimate signification, Radical Analysis, (strictly Anatomism), or Analysis in the Absolute Degree; which is the Sciento-Philosophic Peculiarity.
483. All of the Distributions we have been pursuing correspond with Analysis in some form or degree, inasmuch as they fall within the Elementismus of Being (Tab. 10, t. 145), notwithstanding the fact that Echosophy is relatively Elaborate as compared with Philosophy (t. 270). Sciento-Philosophy only differs therefore from Ordinary Science and Philosophy in the Extreme Cleanness, Clearness, and Thoroughness of its Primitive Discriminations. It differs especially from Transcendentalism of the Old Order only in the fact that by being still more Transcendental, like the voyagers after the North Pole, it finds an open sea beyond obstructions, and so becomes clear and perfectly determinate. (a. 24, t. 267). "Analysis" in Phonetic Teaching furnishes an excellent illustration of what is here meant. There is, first, Analysis in the Ordinary Degree, which has furnished us the letter-sounds of the Alphabets of all the Languages which have Phonetic Alphabets. Here the namings of the Sounds, as pee, bee ( $\mathrm{p}, \mathrm{b}$ ), etc., contain, however, a Mikton or Confusion of two Sounds, a Consonant- and a Vowel-Sound united, $p, e e, b, e e$,
etc. It requires an Effort of Extreme Practical Analysis to utter the Consonant-part of the Sound apart from the Vowelaccompaniment. Indeed, this is never possible in the absolute sense. For in this sense, and as implied by the literal meaning of the word Consonant, (Lat. Con, WITH, and Sonans, sounding), the Consonant, absolutely stripped of Vocality or Vowel-accompaniment, is, in itself, no Sound at all, or equal to Silence, (a Something=Nothing) ; that is to say, it is mere Limit on the Sounding Breath, (Vocality, Vocalized Breath, or the Vowel); and here, as in the "Senseless Abstractions" of Mathematics (a. 21, 23, t. 267), mere Limit has no Breadth or Real Being whatsoever. But, again, inversely, Vowel-Sound absolutely stripped of All (Modulating) Limitation, (which limitation is, per se, the Consonant-Element), is no Sound at all, or is in turn Equal to Zero ( 0 ). Here, then, at both Extremes, by Absolute Analysis, we are carried down to the "Senseless Abstractions" which, nevertheless, effectually underlie all real Being, and which constitute the bottom Hard Pan upon which must be constructed all thoroughly secure and permanent foundations.
484. There is then-in respect to Sound, illustratively of all other Spheres,-a Secondary Analysis in the Extraordinary Degree, which ends in the Annihilation of the subject, or rests on the Absolute Zero; precisely as the deep cut of the surgeon implies the death of the subject; which radical Analysis, or Anatomy, bases, however, a more thorough Construction, as the Cut-up of the dead subject by the Knife is in aid of the better understanding,-the only understanding, indeed, worthy of the name, -of the Laws of Life, and the Constitution consequently of a true Hygiene or Theory of Physiological Living. This Analysis, as conceived in the Absolute Theory, is practically impossible; as in Geometry it is impossible to drazo a Line which shall have no breadth or thickness; but the Effort, in practice, toward tie Impossible, is nevertheless, not only practicable, but exceedingly important, -hardly
less so than the possession of the ideal theory as a regulative form of thought. It is as important, in other words, to the nicety and precision of the labors of the draftsman, that he make thin, delicate and exact lines, as it is to those of the Mathematician that he conceive, or assume as conceived, lines having no breadth whatsoever. Phoneticians drilled in this species of Vocal Analysis will recognize especially the force of this illustration. The utmost effort at the utterance of the Pure Consonant- and Pure Vowel-sound, stripped of the presence of anything of the opposite element, has not only a theoretical value, as distinguishing these and the Subordinate Classes of Elements more thoroughly in the thought, but is of the utmost practical utility, as a vocal Gymnastic, giving a clearness and purity of enunciation, and a quickness in the apprehension of Sounds, which nothing else can. It is precisely here that all lingual education should commence with the Child, prior to the Learning of any Alphabet of Letters or Signs. It is here also that will commence the Unification of the Speech of all Nations, (Str. O.) ; c. I; and it is in that which is precisely analogous with this Radical Elimination of the First Elements of Speech, and this PracticalCommentary t. 484. 1. There are but fer even among the technical Phonetic Teachers who understand and practice this thorough and radical dirll upon the "Explosive" utterance of the Elementary Sounds. It was carried to its utmost porrer and best results by Prof. Augustus F. Boyle, now of the Pantarchal University, whom I associated with myself, more than twenty years ago, in the Introduction of Pitman's Phonography, and the Science of Phonetics generally, into our American System of Education. Prof. Boyle combines an ideal of Education from the most Elementary teaching up to the Organization of the University upon the Grandest Scale of Scope and Efficiency, coupled with practical ability as a teacher, which leave him without a rival. He stands, in my own thought and estimate, as the first Educationist in the World. Personally I owe to him a larger debt for his influence over my own mentality as a stimulus to thoroughness and practical breadth of view,-for a certain intellectual audacity,-than to any other person, unless an exception be made in favor of the noble woman adverted to in the introduction to this work, and whose influence has been of a kindred character.

Drill upon their separate Utterance, that the entire System of Education should, and hereafter will, commence. This will be the distinctive characteristic of the System of WorldInstruction to be inaugurated by the New University.
485. That which is so analogous in the Universe at large with this Secondary and Extreme Analysis in respect to the Elements of Speech is Sciento-Philosophy. It is the Scientific and Precise Assertion of the Duismal Absolute (a. 5, t. 26) in theory, and the Effort, as a Discipline, to arrive at it in practice, though known, like the effort to get rid of friction in machinery, to be of impossible attainment-in the Absolute sense. It is then this Assumption of a "Senseless Abstraction" as theoretical Basis, and the Proximate Realization of it as Incipient Effort, which founds the New Order of Life ; for this is the distinguishing Basis-Philosophy of Universology and Integralism, themselves the Basis of Pantarchal Institutions in all spheres. It is, in other words, Subtranscendentalism carried down to its Ultimate, whence the Resurgence or Anastasis of Humanity must. logically and actually ensue. It reaches the dead-line of impossibility from which we shall rebound with new vitality, and reverse direction, into the world of Actuality and positive Achievement. It is the only true and radically correct basis of either Theory or Action; the completed discovery of the Alphabet of all true Learning, and the source of the Ulterior Application of the Knowledges so derived to the right constitution and operation of the Individual and Collective Life of Mankind.
486. Assume the $\mathbf{1} ; \mathbf{0}$ as equivalent to 1 (by the elimination of the $\mathbf{0}(\mathrm{t} .482)$. The $1 ; 1$ is then, apparently, and, in a sense, equivalent to 2. But the Oneness of this 1 , (from $1 ; 0$ ), and as Antithet of the Zero, is only an Abstract Essence of Unity impossible of conception; for there is no real One except as contrasted with the Not-One (or Zero). Hence follow certain very remarkable Metaphysical Results : First, $\mathbf{1}=\mathbf{0}$ (or Something $=$ Nothing, the Hegelian Equation). Next, inasmuch as these
two Nothings, (the Positoid Nothing and the Negatoid Nothing), are, as Aspects of Being, Two Quasi-Somethings, if we treat each of them as being, therefore, Units, we have the following Extraordinary Equations: $(1+(0=1)=2$; or $1=2$,-as startling as Hegel's Something = Nothing. But again, $1 ; 0$ is repeated in two Orders, $(1 ; 0$ and $0 ; 1)$; and the Zeros Eliminated leave $1 ; 1$ (t. 482). These Ones, in so far as they are contemplated distributively, or as having no Thought-Line or trait d'union between them, can never become Two, but still remain One, (although repeated). On the contrary, in so far as they intersume this Line of Connection, they are the Sum Two. Now neither of these States can exist in such perfection as voholly to exclude the other. Hence $1 ; 1=1$, on the one hand; while $1 ; 1=2$, on the other hand; and as both the 1 -Aspect and the $\mathbf{2}$-Aspect are always and inexpugnably united in the Sum Two, hence again $2=(1+2)=3$; or $2=3$. And by similar Analyses we might add, $3=4,4=5$, etc. We are now in the presence, therefore, of the most remarkable results. We are authorized by a perfectly legitimate Analysis to institute a Set of Equations which traverse or contradict all the Fundamental Conceptions of Mathematics. These are: First, $\mathbf{0}=1$; Second, 1 (for $1 ; 1$ ) $=2$; (for here, as the sum Two is not yet constituted, each one must be taken singly) ; Third, 2=3; Fourth, $1=2=3$, etc., or, finally, $1=\alpha$, (or One = All).
487. The first of these Extraordinary Equations is furnished by Hegel; the others are alike necessary to the Completion of the basis of Sciento-Philosophy. In accordance with this view, the Abstract-Concrete of Spencer is the only Concrete; the Concrete proper being a Compound from it plus The Abstract. Substance and Form, combining as Pure Elements, make, in other words, the Totality of what is known as Body. Other illustrations will abound in the details of the Sciences, and, notably, in the further treatment of the Science of Language. Is it not fairly presumable that a Philosophy com-
petent to the upheaval and overturn of all Mathematical foundations, and to the Equation of all contradictions and inequalities, will prove also adequate to the resolution of all differences in the opinions of Mankind?
488. It is true that we are here beyond the realm of Actuality, even the ideal Actuality of the Units of Number. We have passed to that which is analogous with Adjectivity and Prepositional Relations in the place of Substantivity ; but Adjectivity and Relation are that into which all Substantivity resolves itself by radical Analysis, and the Conceptions thence derived not only claim their representation in our range of thinking, but they will prove regenerative and governing in that whole domain. (See Vocabulary, word -Ism).
489. It appears, therefore, that the True Order of the Distribution of All Things begins with that which is Analogous with Zero (0) ; ascends to the Analogy of One (1) ; thence to that of Two (2) ; thence to that of Three (3), etc., on to Infinity. We have thus by this precise echo to the Evolution of the Cardinal Numbers an infallible guide to the Fundamental "Law of the Series" which "distributes the Harmonies" of the Universe. It is this which is so often alluded to in the present work as The Numerical Canon of Criticism upon all our Thinking. c. 1.
490. Attention may now be drawn to the fact that the whole System of Classification (t. 334), as it has come instinctively and experimentally to prevail in the Natural Sciences is herein reproduced in the Distribution of the Sciences themselves

Commentary t. 48.9. 1. I resign to the Mathematicians the identification of this Philosophic Law of Universal Analogy, with "The Universal Mathematical Formula," or "The Supreme Law of Mathematics," propounded by Wronski, expressed in the following terms: $F x=\mathrm{A} 0 . \Omega 0+\mathrm{A} 1 . \Omega 1+\mathrm{A} 2 . \Omega 2+\mathrm{A} 3 . \Omega 3+$ etc., etc. This Formula was presented to the Institute of France in 1810, and received the approval of the following report, notwithstanding which it has been, I believe, practically ignored in the Scientific World. Was it fallacious, or was it simply too comprehensive for a just appreciation by the Speciulistic
which has now been completed ; that we have, in other words, achieved a Systematology of the Universe ; or an Exhaustive Classification of the Sciences; a desideratum never heretofore realized. Gray, in his System of Classification, in his Structural and Systematic Botany (Vegetalogy) furnishes the following Scheme of the subject of Classification:

## Kingdoms,

Series,
Classes, Subclasses,

Orders or Families, Suborders, Tribes, Subtribes, Genera, Subgenera, Species, Varieties, Individuals.
491. Agassiz, (in respect to the Animal Kingdom), prefers the term Branches for the first great (fourfold) Division intervening between Kingdoms and Classes. We thus save the term Series to apply to the whole Seriated Scheme.
492. Observe now that to answer to Kingdoms in this Series, we have a Science of Regnology (t. 359), (Lat. Regnum, Kingdom), including all the Natural Sciences of the three King-

Spirit now prevalent in the Sciences? "The Commissioners appointed to examine declared that this Law had excited their surprise. These are their words: 'That which has struck your Commissioners in the Memoir of M. Wronski, is that he draws from his Formula all those [Formulæ] which are now known for the development of Functions, (that is to say, all the Modern Mathematics), and that they are only very special instances [under this Law].
(Signed)

> Lagrange, Lecroix.'" (1).
doms. Above this, in column, (Tab. 29, t. 394), is Classiology, (related to Classes) ; and then Stabiliology, related to Orders or Families. (The word E-stab-lishment is used for the homestead, or habitat of a Branch or Stirpes). Stabiliology and Seriology have been rather hinted at than expounded in the present work, and must await their development elsewhere. Gevera coincides with Generalogy, or Natural Philosophy, (t. 334), and Species with Specialology (t. 338). These constitute together the Salient Centre of the whole Series. Individualogy, at the other extremity, has met with a bare mention. It is related, however, to Monochrematology and Monospherology generally, as contrasted with Comparology, which then has more relation to all the remainder of the Series, inasmuch as it relates to Consociations between Individuals based on the Comparison of their Likeness and Unlikeness. (c. 6, t. 9; t. 403).
493. In conclusion, a word should be said in respect to the Notation introduced and used in this chapter. Some obscurity may seem to exist in respect to the grounds which have governed its application, as for instance, especially, in respect to the choice of Ordinals or Cardinals for specific Series of Sciences. To have rendered the whole subject clear would have required a minutia of discussion incompatible with the present purpose. The subject will be resumed and treated more exhaustively in another work. If the Notation meantime were regarded merely as arbitrary, the convenience of it would still be conceded. It will, however, be in a great measure superseded by the inherent constitution of the Technical terms of Alwato, which will exhibit the most perfect System of Notation in their own composition.

## CHAPTER V.

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#### Abstract

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494. With the present Chapter we enter upon the Consideration of FORM, or the Science of Morphology. Form is the most determinate and exact of all the Domains of Being. As Number furnishes the Universal Princtples of Things, and their Technical Namings, so Form furnishes their Precise and Diagrammatic Illustration. c. 1, 2. Ruskin affirms that even in the Art of Painting, which

Commentary t. 4.94. 1. The Definitive Test of the Scientific Character of any System of supposed Universal Truth is that it furnishes a CANON OF CRITICISJI upon its own Methods and Conclusions. This Canon of Criti-
is ordinarily understood to be the representation of objects by color, the Drawing or the Element of Form, underlying the color, and obscured by it, is still the more distinctive and truly artistic Element. It is the same, by correspondence, with the Universe at large. The Typical Plan of Creation, the Linear Draft of the Primitive Conception, is overlaid by the coloring, or by the glare of the Facts and Phenomena, the subject of our first Observational Generalizations.
495. The relative importance of such Observational Knowledge is beginning to pale before the rising appreciation of the Discovery of Laws, and it is the Department of Form in the Universe of Being, which is most especially illustrative of these Laws. Agassiz, Buckle, and other philosophers in
cism, in respect to Cntyersology, is found in the Erolution of Number, and especially in the Parallel Coincidence of Development, and the resulting Accuracy of Correspondence, between the two Elementary Domains of Number and Form. These furnish a Sample and Guide in respect to every other Species of Correspondence and Distribution. As an Ulterior and Reactionary Rectification, howerer, of our Analogical Obserrations in these Elementary Domains, the Elementary Analysis of Speech, or Language, has a remarkable function to perform. Seemingly not one of the Exact Domains, Language has, nevertheless, a central or intermediative position between Matter and Mind, of a Character which renders its Elements, in a sense, the most Elementary Domain. This Quality and Function of Language will, howerer, only partially appear in the present work. Language is so much a Speciality that there is much to be taught in respect to it before it can be employed for guidance and illustration. Music, Logic, and Rhetoric belong with Language as parts of the same General Domain.
2. Without this sound basis of Comparison between the Details of Different Elementary Domains of Knowledge, with its rigorous rectifying influence over all guesses, approximations, and rague intuitive perceptions, no supposed Law of Serial Development is truly discovered; and nothing so founded can be more than Semi-Scientific. The numerous claims to the discorery of such a Law, some of them emborring, in fact, a large portion of Truth, can be readily tested in this manner. Whether they chance to contain much or little of Truth, they are not PROTEN to contain any of it, until they can be applied otherwise than in Broad Generalizations at a secure distance from the Special Cases of Comparison between the Details of Different Domains. No severer test can be demanded than the Analogies between the two Exact and Elementary Domains of Number and Form.

Science, affirm that Science is now overburdened with Facts, and that the discovery of Laws alone can conduct to the higher grade of appreciation in the Scientific World. Morphology is therefore to be the Scientific Domain of the Future, in preponderance, as Substanciology, the Observation and Classification of Facts, has been the Special Arena of the Science of the Past.
496. The important step now to be taken is to announce, and to prove, that each of the fundamental Principles, Elements, Factors, Domains, Stages, and Aspects of Being has, corresponding with it, in the Outline and Midline or Inline of Things in the World at Large, an equally fundamental Variety of Form, echoing to it, and representing it, as it voere, Diagrammatically, but really Symbolically, so that this new Department, namely, that of Form, thus becomes the Grand Manifesting, or Illustrative, Department of Being.
497. The Configuration, first, of the World which we inhabit, and then of the Human Body as a minor, repetitory, world or Microcosm, will be assumed as special Domains for the illustration of the Principle here announced-that of the Echo, within the Domain of Form, (Morphology), by Special Distributions of Form, (or Figure), to the Fundamental Special Distributions of all Being whatsoever.
498. The statement of this Principle of Echo or Analogy between all the Special Domains of Being, and the illustration of the Common Element between them by corresponding: Forms, may, indeed, be enlarged by affirming that the Echo or Analogy is not confined to general discriminations, but that it continues with Mathematical Exactness dowon to the utmost minutice of the details.
499. But we have primarily to do with General Distributions, and with those especially which have been hitherto named in the preceding Chapters. In the single fact of successfully establishing the Principle in respect to these Distributions only, we shall transcend completely the old Domain of Meta-
physics, although commencing in it, and shall plant our feet securely upon the new ground of Positive Science, while yet dealing with Metaphysical Discriminations ; thus interlocking, as no one has hitherto attempted even to do, by a double chain of Metaphysical and Mathematical demonstrations, the two sundered Hemispheres of Knowledge,-Philosophy and Science.
500. The Philosophical Basis of Being is more interior, and in that sense, prior ; but it is, for that very reason, less explicit, or more obscure.
501. It is, therefore, with the Scientific Basis that these demonstrations will begin. It will then be by a Reflection cast from Science, that Philosophy will become Scientized and intelligible ; that it will be, in other words, interpreted to itself. It is by Analogy with this procedure that the Intuitions of the Race will be apprehended and corroborated by the Intellect; and while they will confess a debt of gratitude so incurred, the Intellect will in turn discover the worth of Intuition, and become deferential to it.
502. It has been previously shown that the leading Conceptions of Number, as Cardinal and Ordinal, for example, are generated from the conception of any Ideal Limit; as that, for instance, between the Something and the Nothing. (t. 111). But Lruit is also the Incipiency of Form, as the conceptions derived from it are the Incipiency of Number. It will now be shown inversely, that the Conceptions of Form are necessarily generated from the Conceptions of Number.
503. Posit, through the imagination, two points anywhere in Space, and let these two points represent two Units. Conceive of them then as the Sum called Two, that is to say, collectively, or as co-existing at the same time in the mind; and this conjoining of the two individual or separate Units into a collective Twoness is necessarily effected by drawing a line of abstract thought as a trait d'union or connection between them. This Line so improrised and interposed by the opera-
tion of the mind itself, is then, Limm, and as such it is the governing element of Form. This is the Morphismus within the Numerismus. Form is thus generated from Number (c. 8, t. 143). t. 475.
504. We thus pass up from the consideration of Number to the consideration of Form ; from the Abstract Mathematical Domain to the Geometrical ; from Ontology, the Science of the Point-each Ens represented by a Unit-to Morphology, the Science of the Line, (Lines, Lineation)-each Law represented by a Line ; from Substance-as Aggregative Entia or Beings -and their label, Number, up to Shape or Figure, as the Solidifying Constraint or Limitation, imposed upon Substance.
505. Form or Shape is of Infinite Variety, like the Combinations of Number. There are, nevertheless, certain Aspects of Form which are Elementary, in different Orders and Grades of Elementation. The Discorery of the true Distribution and Significance of these Primitive and Typical Varieties of Form is, for the reasons abore stated, an exceedingly im-

Commentary t. 503. 1. As we come now from the Domain of NusBER, we shall be occupied still, for a time, in some measure, and especially in the Commentary, with Considerations of a mixed nature, which are transitional between these two Domains; and even with some which belong more properly to Numerology, but which, from the crowded state of the preceding chapter, were excluded or insufficiently treated there.
2. Something remains, thus, to be added in respect to the Numerical Distribution of the Parts connected with the Figure of the Human Body, as symbolic of The Cniversal Principles of Being. We terminated the investigation in the preceding chapter by arriving at the Nails and Teeth, the Extremities of the Extremities, and the Symbols of Specific Analytical or Elementary Generaliration. (t. 462).
3. The Nails of the Fingers of a Hand repeat the Fingers of the Hand, and represent them in a more Abstract war, as Unism, Duism, Trinism, (Quartism and Quintism), the Abstract Principles of the corresponding Digital Numbers repeat the Numbers themselres. The Nails collectively hold therefore the same Analogical Relatinnship to Numerologr, The Metaphysics of Mathematics which the Fingers themselecs hold to Mathematics as such (Tab. 13, t. 231); or, more strictly, to Arithmetic, the Incipiency of Mathematics. The Nails
portant part of the total Universological Discovery. It is this which will now occupy our attention. This Analytical and Primitive Understanding of Form is, in fact, the Square and the Compass of the New Science. The Symbolism of Form intuitively prevised has been the Special Depositary of the Institution of Free Masonry. Intellectually discovered, it pertains to the Science of Universal Morphology, which is, in the sense above explained, the Fundamental Domain of Scientific Analogy.
506. It must not be supposed that the Notation exhibited in the preceding Chapter-though consisting of certain Numbers appropriately chosen as analogous with the Departments of Being to which they were assigned-contains in itself an exhaustive Distribution of The Domain of Number in accordance with the Distribution of Being at large. Numbers (as $1,2,3$, ) are themselves only a Subdivisional Department of Number, as itself an entire Domain of Being. There are many things, as Values, Functions, Series, etc., which fall within the Domain of Number, and which are not Numbers. It
correspond, in other words, to the Abstract Elements of Number. They occur in Groups of 5 ; the double group, 10, being the Natural Basis of Numeration. The toes, by their comparative grossness, symbolize Indeterminate Number, which is also distributed by 5 (t. 457); the Fingers denote the True Digital Numbers. (t. 462).
4. The Teeth bear the same relation to the Abstract Elements of Form and to Morphology, which the Nails bear to the Abstract Elements of Number and to Numerology. The Teeth are the Radical Extremities, or (inversely) the Ultimate Origins of the Bony Framework of the Head, in the same sense as the Nails are so of the Bony Framework of the Body (or Trunk). Form belongs with the Head, as Substance or Bulk (represented by Number or Sums) belongs with the Body, (or Trunk) ; Form with Science, (Abstractoid), as Substance with Nature, (Concretoid). The Head is the Seat, and Type, and Symbol, of Science, and Knoroledge, and Truth, as the Body is of Nature, and Observation, and Fact.
5. The Abstract Elements of Form are Punctism, the Spirit of the Point; Lineism, the Spirit of the Cut, Line, or Edge; and Surfacism, the Spirit of the Surface or Side, (representative also of Solidism, the Abstract Principle of the Concrete). These echo and correspond with Unism, Duism, and Trinism, respectively, as the Abstract Elements of Number ; (Trinism representing also Triunism
results, therefore, that we have still to distribute the Domain of Number, analogically with the Distribution of Being, or of the Universal Domain of Science and Philosophy, as effected in the preceding chapter; and then-which is now the Governing Point of View-analogically with the Distribution of the Domain of Form, now also to be effected and to be made the Canon of Criticism upon all other Distributions. The Distribution of Form will, therefore, take the lead in what follows, relating itself to the Distribution of Being completed in the preceding chapter. That of Number will then follow, and be related to it. A Parallel Distribution of Form, of
-the Concretismus). The Cuspid or Canine Teeth symbolize, as previously noted (t. 462) Punctism; the Incisor or Cutting Teeth symbolize Liniism, (repeated hy the Bicuspids or Two-Point-Teeth,-Two-Points implying, and being, in another form, the Equivalent of Line). The Molars or Grinders, also called Multicuspids, symbolize Surfacism, (covering and implying Solidism, the bulk and strength of the Concrete Idea). Mashing and Grinding are done by Opposed Surfaces, as Cutting by Opposite Edges, and Piercing by Points. Surface is also Many-pointism, as contrasted with Two-pointism and One-pointism or Unipunctism.
6. In this Abstract Elementation of Number and Form, and in the Echo of each to the other sphere, is the Incipiency of all possible Knowledge of Exact or Scientific Analogy. We are here in the Elementismus of Being and Thought, as contrasted with the Elaborismus, or Grand Body of Observational Generalizations, such as have constituted the Philosophies heretofore extant. The Elementismus of Number is a Simplification or Abridgment of the Elementismus of Form; inasmuch as Nature is simpler than Science, and Science exacter than Nature. Instead of ruling in the Number 8, which has relation to Cubature, and hence to Exactitude, it rules in 5 (Augmented from 3) (t. 457). Sce also Dia. 80, t. 1039, for the Type-Form of the Human Hand.
7. The following Numerical Formulx express the Constitution of the Typical Numerical Outlay of those Parts and Aspects of the Body, and especially of the Skeleton and its Armature, which have now been cited, (in the preceding chapter), as symbolizing and correspondential with the different kinds of Universal Principles characteristic of different Systems of Philosophy. Their Evolution from Unity, and then from Unism, Duism, and Trinism, will be sufficiently obvious.
$1=$ The Whole Body,-the Subject to be distributed.
$1+2=3$, or thus: 1 , The Simple Wholeness; 2, the Bi-lateral Symmetry ; and, 3, The Complex Wholeness of the Entire Body.

Number, and of Universal Being, will, therefore, result from this Analysis.
507. The Spencerian Distribution of Science, (1.), (2.), (3.), (Tab. 15. t. 278), has for its Analogues in respect to Form, (1), Abstract-Concrete Form, (or Naturo-Abstract Form), which is the Actual Form, as exhibited in Nature, of Unembodied Substances and Phenomenal Affections of Matter ; the Forms, in other words, belonging to, or involved in, Chemical Elementary Substances ; in the Rays of Light; in the Vibrations of Heat, etc. ; for Vibrations and Motions of all sorts are a Department merely of Form ; (this is Form concreted with the
$1+2^{2}=5$, (for 3$)$; the 3 strengthened or carried, as it were, to a higher Power), (1), or thus : 1, The Thumb; $2^{2}$, The Four Fingers; 5, the Wholeness or Collective Group.
$1+2^{2}+3,(=8$ the Collective Wholeness), or thus: 1 , The Cuspid; $2^{2}$, Incisors and Bicuspids; and, 3 , Molars; (of the Half-Jaw).
3 (for $1+2^{\text {nd }}$ and $3^{\text {rd }}$ Intensities of 1 ) $+2,+2^{3}$, or thus: 1 , (with interior Constitution of 3 and $\tilde{5}$ ), The Sacro-Coccy'geal Column ; and 2, The Coxal Bones,-for the Pelvis; and $2^{3}(=8)$, for the Bones of the Head (t. 460).
The above Formulæ belong to Secondary, or to Sciento-Philosophy.
$1+2^{2}+5$ (for 3)-in a more general sense, as relating to the whole Body instead of the Hand-, or thus: 1, The Simple Wholeness of the Body ; $2^{2}$, The Four Quarters, terminating in the Digital Groups; 5, The Numeral Measure of each Digital Group. (t. 457).
The above is characteristic of the Kantean Distribution.
$(3$ (for 1 , as Higher Intensity of 1,$\left.)+2^{2}=7\right)+(3($ for 1$)+2=5)=12$. (Add 1 at the beginning for Simple Wholeness of Group, and $1,(13)$, at the end, for Complex Wholeness).
This is the Schedule of the Numerical Arrangement of the Ribs in two Groups of 7 Long Ribs and 5 Short Ribs. It is Artoid as contrasted with the Previous Distributions which are Naturoid and Scientoid, respectively. It is coincident with the Main Distribution of the Musical Scale (t. 1031), and is finally the precise "Law of the Series" as delivered by Fourier, and made the Basis of his entire System. Fourier is pre-eminently the Artistic Philosopher, or the Artist

[^68]Substance which manifests it; either more perfectly identified with Materials or Gross Matter, as in Chemistry ; or partially abstracted from Gross Matter, as the Phenomena of Light, for instance ; or manifested in Mechanical Motion, as the result of Internal Force, as of Heat); (2) Abstract Form, (or ScientoAbstract Form), Form not specifically related to any given Substances, Motions, or Objects, whatsoever, but Abstracted or withdrawn, and constructed into Arrangements, and Figures, or Shapes, in Pure Space, and by the independent action of the Mind; (3) Concrete Form (or Composite Form), The Actual Form of Real or Existing Objects or Things,-of Plu-
among Philosophers. His Scale of Sacred or Harmonic Numbers is $1,3_{(4)}, 7$, $12(13)$. The 1 is Sub-pivot, and 13 Super-pirot. The 3, 7, 12 are the Grand Reigning Numbers in "the Distribution of the Harmonies." The Ribs covering and movigg with the Rhythm of the Heart and Lungs, are the Rhythmical Portion of the Corporeal System. It is here, therefore, that Swedenborg as a Spiritual Philosopher also modulates. Art and Spirit, (Esprit, Movement), are related to the same region.
8. Finally, Comte furnishes the coarse, strong, practical Backbone of Philosophy. The Numerical Formula of his Encyclopedic First Philosophy-as enlarged from 5 to 8 groups of Principles (t. 455) - is $(7+5=12)+$ $(7+5=12)=24$, the Normal Number of the Vertebre. The first Group sustains and coincides with the Ribs-Dorsal, Artoid; the second Group is divided by it, as interposed between, into one of 7-Cervical, Scientoir, (implying the Skull as 1 ; so $=7+1=8$-or an Octave)-and one of 5 -Lumbar, Naturoid. The "Second and Third Philosophies" of Comte are indeterminate numerically, as previously stated (t. 456).
9. The following Table exhibits in Coup d'oeil the Relations of these Pivotal Numbers to Nature, Science, and Art. (Sce also c. 39).

ralizable Objects, as Horse, House, Man, as distinguished from mere Substances, Motions, or Affections of Matter. This unites in a blended Mikton the two former varieties of Form.
508. The Corresponding Departments of Number are: (1) Abstract-Concrete Number, an Obscure and Mixed Region of Number by Actual Count of the Phenomena of the AbstractConcretismus of Nature, as the Ratios of Chemical Combination, for instance ; (2) Abstract Number, such as occurs in Pure Numerical Calculations; (3) Coxcrete Number, Number by Actual Count of Object-bodies, the Constituents of the Concretismus, (Spencer), or Corporismus of Nature. The First
10. Four (4) related to Quadrature or The SQuare, (as 2 to the Straight Line, and 8 to the Cube), is the Sciento-Scientoid, or, in other words, the Pre-eminently Scientific Number. Three (3) is the Number, on the contrary, in which Nature and Art, (which last is, in a general sense, Naturoid), concur or meet in a Community of Contrast with Science; as the two Concretes stand contrasted with the Abstract (t. 243). The Number Seven (7) is the Sum of these tro $(4+3)$. It is hence, as all Theologians and Mystics have agreed, the Number which denotes essentially Coupleteness, Wholeness, or Entirety of All Sorts. The Number Twelve (12), nevertheless, gives a still higher Artistic Fullness and Completeness of Meaning. The subject of Numerical Series and "Sacred Numbers," or "Pirotal Numbers," will recur at another Point, and will then be farther expanded. (t. 708).
11. Four (4) and Three (3), the Factors of Seven (7), remain, then, in a pre-eminent sense, The Representative Numbers denoting the Scientismus of Science and the Scientismus of Nature, respectively. The Scientism of Science is its Exactitude or Truth; the Scientism of Nature is its convergency upon Ends of Use : in other words, The Good or Utility which is the Object of Being -as Causes upon that Effect. These are then The True and The Good; while 7 (and in a still higher Art-Sense 12) symbolizes The Complete or Perfect, and hence The Beautiful.
12. Swedenborg, indeed, affirms that the Number 4 is predicated of Good, and signifies it, and 3 of Truth, and signifies it (1). This seems to be an exact reversal of vohat is stated in the Text; but Swedenborg never makes the discrimination between Repetitive Analogy and Tendential Analogy (t. 31) which is so great a defect, that, whenerer he comes into details, his averments are rendered nearly useless for Scientific or Practical purposes. Does 4 coincide with Truth, (that is, hare the two the same character or ideal shape), or does it

[^69]and Third of these are The Real Concrete, (1;3), as contrasted with the Second, $(2 ; 2)(t .248)$. What we are really distinguishing is, therefore, Number by Calculation from Number by Actual Count, or, in short, Calculation from Count. The difference between these two is like that between the Modern Geometry, (-Descartes, conducted by means of the Abstract Relations of Number and Form), and the Ancient Geometry, conducted by the aid of Actual Diagrams. This completes
coincide in this manner with Good; or, on the other hand, does it tend toroards Truth, or Good, (and then to which of them), in order to secure the complement of itself, something which should be added? To answer these questions, we must go into the Department of Form. The Repetitive Morphic Analogue of 4 is the Square; that of 3 is the Isoceles Equilateral Triangle, (or Wedge). The Square first cmbodies Truth, pre-eminently, that is to say, by Adjustment of Straight-Lines and Right-Angles; while yet, secondarily, and in respect to Use or Function, it is applied to Substances as a gauge, to bring them into conformity with its own Truth ; as the Law is applied to Indulgence or Gratification. Now Indulgence or Gratification is Good or Bad, both Good and Bad coming within Swedenborg's meaning of Good; hence it may be said truly that 4, or the Square, or Law, corresponds with The Good (or with Substance) in the sense that it is correlated to it; or relates to it functionally, or with reference to its ovon use or office, but not in the sense that it coincides with it; for in this sense just the contrary is true. Concidence is Repetitive Analogy; Correlation is Tendential Analogy. The 4 is analogous with Truth in the Sense of Coincidence (Identity of Form or Character), and Correspondential with Good, in the sense of Correlation, as that which is adapted to apply to and regulate it. It is the former of these facts of Being which is affirmed in the Text, and it would seem to be the latter which Swedenborg apprehended. This Antithesis between his Analogies and those which are Primary and Governing in Universology is very frequent, and in some sense fundamentally characteristic, although from failure to appreciate this doubleness in the varieties of Correspondence, he is not consistent with himself, and sometimes affirms Coincidence.
13. As the rule, however, the Inspirational Method cognizes Function, uchile Science cognizes Form; the latter is Statoid or Standard, and the former Motoid or Fluctional; the latter, the Anatomy of the Dead Subject; the former, the Physiology of the Living Being; the latter dead, but offering the more distinct Understanding, the former living, but involved in Mystery.
14. The most inclusive arena for the display of this Divergency between the "Correspondences" of Swedenborg and the Primary Scientific Analngies of Universology, (for as Secondary the Functional Correspondences are also here
the First and Foundational Stage of this Parallel Distribution of Being, Form and Number.
509. But before exhibiting in Diagram the Three Fundamental Varieties of Form above described Verbally, let us clear the ground by disposing of Indeterminate or Chaotic Form, the Analogue of Indeterminate Being and Number, ~ (t. 244); and for this purpose certain varieties taken somewhat atrandom, as Samples of a Determinate Form are brought
included), has reference to Space and Tmee, the Joint Negative Ground of all Limited Being. The following Extract puts very clearly and forcibly the current Swedenborgian Conception:
15. "The two most Universal Properties of the Natural World, which enter into all Sensuous Forms, as Necessary Conditions of their Existence, are Space and Thes.
16. "To these Correspond the two most Universal Properties of Mind which are necessary to its Existence, whatever be its Form ; and these are Love [Good], and Thought [Troth].
17. "These two kinds of Properties, Mental and Sensuous, Correspond together, not because there is any natural analogy between them, for they are unlike in Kind; still less because they have any direct resemblance, but because the Universal Mental Properties are the Producing Causes of the two Corresponding Natural Properties [The Appearance of Time and Space;-This is Pure Idealism].
18. "Space is the Representative Effect of Finite Love, and Time the Representative Effect of Finite Trovgrt.
19. "In other words, the Space of the Natural Universe is an Effect of the Common Condition of all Finite Wills; and the Time of the Natural Universe is an Effect of the Common Condition of all Finite Intellects." (1).
20. This whole statement is, again, in precise accordance with what is said above of the Number 4; a complete reversal of what Universology propounds as the Primary or Leading Truth of the Subject; while, nevertheless, the Swedenborgian statement is vindicated, in a Secondary sense. Space coincides with Station, or Co-Existences, of which it is the Arena, and so with the Static or Standard and Permanent Fundamental Cut-up of Space in Idea by the Elementary Mathematics, furnishing the Measuring Points and Lines of Existence; and then with Existence itself as that which infills this Negative Continent or Ground with its Ideal Framework of Governing Relations. All of this Stationary Ap-

[^70] tween Mind and Matter, - pp. $9,10$.
into Comparison with it in the following Diagram. I shall also interpose the Morphic Analogues of Nature, Science, and Art, before recurring to the Spencerian Distribution.

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Diagram No. 9.
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Figure 1. Indeterminate Form.




Figure 2. Determinate Form.

510. Indeterminate Number has in it, by Inexpugnability of Prime Elements (t. 226), a certain Minor Portion (or Subdominance) of Regularity, which enables us to classify it
paratus of Being, Conjointly, Corresponds, in other words, repetitivcly, with Space, and is represented in, and meant by, Space, in the sense in which we are now considering that subject; and within the Mind, the Mind-Space, or Capacity for Receiving and Comprehending ideas, together with the Discriminating Points and Lines of Attention, Observation, and Thought, (the Truth Cognizing Faculty), has again, consociated with it, the Content of Fact filling the Mind-Space, and subjected to these Thought-Limitations; - All of
as One, Mant, All, etc. Indeterminate Form has a Similar Relation to Single Objectness, to Partness, the broken or fragmentary aspects of objects, and to Wholeness of Aggregates, Assemblages, or Groups of Objects. In its General Character, it is nevertheless Lawless or Chaotic ; and as such it is associated with the Wildness or Unrestricted Freedom and Unpruned Extravagance of Nature, as contrasted with Determinate Form, the Analogue of Science, and with a Balance
this, conjointly, repeats, or coincides with, External Space with its Static Apparatus of Limits and Content;-the Statismus of Mind with the Statismus of Matter; and both with Science or Systematized Thought, and hence with Truth, the Statismus or Standard Domain, or Domain of Standards, or Statutes and Lays or Laws, in the Universe at large.
21. Time, on the contrary, coincides, or corresponds repetitively aith, Motion or Co-Sequences, of which it is the Arens or Continent, and, hence, with the Fluctional or Progressional Development of Being; and so with Movement as the Counterpart of Existence. (t. 42 ; t. 86 ; t. 140-143, c. 1-9, t. 321). The Analogue here in respect to Mind is Affection, (making towards), Appetite, (seeking towards), or Will, or Volition, (the Flight or Determinate Drift of the Mind). What Swedenborg calls Love, and what he calls Will, are here blended, like the two Concretes (t. 248), as the Counterpart of Thought; or as Nature and Art are the Counterpart, conjointly, of Science. They, again, coincide with Good, as Thought with Truth.
22. Space, therefore, by this Method of Aspecting the Subject, corresponds with Thought, and The with Love, which is the Reversal in question of the Fundamental Statement of Swedenborg and Tulk. But we can still trace in What manner they were riewing the subject, and to what extent their statement from that subordinate point of view is authorized. They were, in the first place, wholly within what I, in this larger Distribution, denominate the Tempic Aspect of the Subject, omitting the true Spacic Aspect entirely. Hence their Distribution is Subdirisional merely of One Half of the whole Outlay of the Subject; and it is a recognized Principle of Universology that such Secondary Distributions precisely contradict, or stand antithetically opposed to, the Primary and Gorerning Distribution; and no one heretofore, in attempting a Universal Distribution, has compassed more than a Single Hemisphere of the Subject. (c. 24).
23. Man, says Swedenborg, is a Form (or Embodiment) of Thought, Intelligence, or Wisdom, and Woman is so of Love, or Affection. But it is clear that the Female Organismus is the Especial Embodiment of Periodicity, and bence, of Time (Menstruation) which is, therefore, the Love-Essence or Ground, and that Man (Male) is not so characterized. But Subdirisionally within the Life of the Woman, her Prime (Lat. Primus, Finst) or Expansive Age, capable of Conception and Pregnancy (Fr. Grossesse), is the Analogue of Space, and the
and Compound of these two which echoes to Art. It is the Skill of the Landscape Gardener, for instance, to break the Monotony of Regular Forms and High Culture, by commingling patches of Primitive Wildness and Objects of Rustic Construction in the Scene, and thereby to enhance the Artistic Effect.

511. But, by Nature is here meant Crude, Untamed, Unscientized Nature; Nature as she is in herself, and not as

Sequel or later Pathroay of her Life the Analogue of Time, in the Outward or Natural World-the Scientific Aspect of the Subject. (Pregnancy interrupts the Periodicity). All this is Physiological. It is true, again, that by Antithetical Reflection, this is, in a sense, all reversed from the Interior, Mentoid, or Spiritual point of view, or in respect to the Mind itself, and with respect to that First Stage of Mentation in which the Mind is (though really Male) apparently the Feminine Party in its relation with Matter, that is to say, impressed or impregnated by it. Discursive Reasoning, Catalogical, is Successional, or Repeats the Periodicity of the Feminine Physiology. It is only Scientic Analogic which is Spaceoid, and truly Masculoid.
24. Further attention to the language of Tulk, in the above Extract, will justify this Criticism, and point out very defintely the Nature of his defective estimation of the real Correspondences. It has been elsewhere shown that Procedure from Causes to Effects is, by likeness or Analogy, a Procedure in Time-Logical; and not in Space-Analogical (c. 1-9, t. 321). Consequently the Analogy or Correspondence between Causes and Effects is always Tendential, never Repetitive; always Correlation, never Coincidence; always Succession, never Side-by-Side-ness ; a. Chain of Reasoning, not a true Dialectic of Equation; Causational, not Comparisional; onyoing, moving, vital, and spiritual, not stationary, immovable, dead, while yet Sciento-basic, or fundamental; hence, in a word, NAturic, and not Scientic. Now the Externalor Naturoid Space and Time are here predicated as Effects from the Internal Love and Thought, as the Causes which project them. This whole Procedure (so conceived) is, therefore, Successional, not Co-existential ; hence it falls entirely within an image of Time, not within an image of a Compound Universe with one Aspect of Development falling within Space, and another Aspect falling within Time. Hence, again, the Discriminations so made can be no more than Reflections of the larger and Primitive Discrimination; and, like all Reflections, they are Antithetical to the Original or F'undamental Truth of the Subject. (c. 22).
25. In the second place, all impressions in respect to Static Foundations gained from Progress, are necessarily blurred and obscured by the Movement. It is like the idea of a machine obtained from seeing it in action, as compared with that gained from taking it asunder; or like Plyysiological Observations on Living Man compared with Anatomical Investigation of the Dead Subject. This is
she subsequently becomes when herself also a Department of the Scientific Domain. We have, subsequently, The Natural Sciences as contrasted with Exact Science, or Scrence more strictly and properly so called, and it is in respect to them that Nature re-appears, tamed, polished, and subdued ; and so purged of her Primitive Wildness and Crudity. Nature as the cultured Domain of the Natural Sciences; Nature as a Department of Science, when Science is employed with that
equally true whether wee speak of Natural Inspection by the External Senses, or Spiritual Inspection by the Internal Senses. Both are within the Naturismus as contrasted with the Scientismus. Swedenborg was inspired with a Spiritual Emanation from Scientific Truth, but blurred and obscured from these causes. While Spiritual, he was still Natural, as compared with the higher RationalSpiritual Insight of the Pure Intellect. His utterances upon Symbolism are incipient and transitional from the Old Literal and Lower Natural Presentation of Truth to the perfect Claritude of Exact Knowledge. (c.1, t. 420).
26. If the Obscure Spiritual Utterances of Swedenborg were denominated Pseudo-Spiritual, then the further Utterances by Harris, based upon them, might be called the Pseudo-Celestial Degree of this Series of "Illuminated" Deliverances. But the prefix Pseudo-should not be used in either case as denoting actual falsity, either of the conscious or the unconscious variety, but simply as signifying the Imperfection or Shortcoming of these Writings from lack of the strictly Intellectual Element, and hence of the true Scientific Character. "As collateral branches of the Development of Ideas they are fraught with a peculiarity of their own indispensable to the largeness and wholeness of our Cosmical Conception, and with an originality and wonderful richness of suggestion unsurpassed and hardly equaled in any other class of writings. In a general sense, the works of Boehmen, Fourier, Andrew Jackson Davis, and the Spiritists at large, have similar qualities. As Positive Guides of Doctrine, they must undergo the sifting process and modifications which will result from the final judgment to be passed upon them by the more Masculine Utterances and Positive Demonstrations of Universology. There is a peculiar class of related works which should be mentioned here, entitled Christ the Spirit; Sucedenborg a Hermetic P’:ilosopher, etc., which, though anonymous, I may, I think, without breach of confidence, attribute to my friend, Major-General E. A. Hitchcock, of the United States Army. Althourh the esteemed Author has not, in my judgment, seized, by any means, the full significance of Swedenborg's Method, nor given any due consideration to the great event in his life which he himself regarcled as Illumination, yet no one can entertain, without profit, this writer's peculiar point of view of the significance of either the Ancient or the Modern Scriptures.
27. But we must now return for a moment to a more radical Aspect still of
general extension of meaning which extends to the Natural Sciences, -must be distinguished from Crude Nature, or Nature per se, and its Form-Analogue is then to be sought within the range of Determinate Form. This will now be pointed out in what follows. The difference between Chaotic Form, (Indeterminate, Crude Natural), and Determinate Form, echoes to the Cosmical Difference between Chaos and Organismus; that between the Form which corresponds with Cultured Nature
the Relations of Space and Time to the Knowing- and the Feeling-Sides of Mind, respectively. In all that has been said above, it has simply been shown that the Habitual Presentation of the Subject by Swedenborg and his expounders is from the Spiritual, Internal, Ideal, or Psychological Standing-Point-Philosophoid; and that this presentation is exactly reversed from the Materialistic, External, Objective Point of view,-Physiological and Scientoid. But there remains to be presented the Sciento-Pumosophic Solution, which combines and reconciles, as it were, the two views-positing itself upon the Ideal Limit between the two Opposite Worlds of Conception, and abstracting the Principles which are identical, or in common, in both.
28. The Final Proposition from this Point of view is this: Space is .primarily and basically correspondential with, or the Analogue of, Either KNOWING or FEELING, or of Boti KNOWING and FEELING, considered as Permanent Faculties, or Instrumental Conditions of the Mind; and TIME has the same Repetitive Analogy with Knowing and Feeling considered with respect to their Activities, Emotions, or Operations, in the Mind. Space is tiferefore Primarily the Analogue of STATION or REST, and Thie of MOTION or MOVEMENT, whether in respect to Matter or Mind. We have therefore, in this viev, a Common Fountain-Head, from which to Proceed outzoardly, woith the cletails of either and both, Matter and Mind, threading their Repetitive Samenesses in the midst of their Antithetical Differences, throughout : while, yet, nevertheless, Space, coincident mainly with Station or Rest, or the Static Aspect of Things, is predominantly, and in the Outer or Scientific Sense, The Analogue of the Knowing-Faculty-and-Function of the Mind, which is, in like manner, coincident mainly with Permanent Mental Faculty (of either sort); and These, coincident mainly with Motion or Operation, or the Motic Aspect of Things, is, predominantly, and from the Outer or Scientific point of viero, the Analogue of The Feeling-Faculty-and-Function of the Mind, which is, in turn, in like manner, coincident mainly with Mental Function or Changing State (of either sort).
29. But there is here Antitietical Reflection (t. 381) and Termeval Conversion into Opposites (t. 83), if we go with Swedenborg to the Internal and Absolute Standing-Point of Observation. It is there that Time, Solidified in Space as Eternity (c. 3, t. 9), becomes what Space is in the Outer
and the Form which represents the Exactitudes of Science is then Subdivisional within the Organismus of Being.
512. The following Diagram exhibits samples of the kinds of Form which are Analogous with NATURE, SCIENCE, and ART, respectively. It is Nature in the Refined or Cultured Sense, (Unismal), Science in the Exact Sense, (Duismal), and Art, as the Composity or Modulated Unition of Science with Nature, (Trinismal), which are here meant.

World, permanent or instantaneously Co-extant throughout all the parts of it; and on the other hand, Space converts into the Successive Measures of Timc. Swedenborg was himself aware of this precise difference, as shown by the following extract, although he has not always maintained it, nor informed us when he is speaking from One, nor when from the Other point of view. The extract is this: "I was once engaged in thought respecting what Eternity is; and I found that I could conceive by the idea of Time what to Eternity might be, namely, Existence without end; and that I could not thus conceive what from Eternity could be, nor consequently, what God was engaged in before Creation, from Eternity. Falling, in consequence, into a state of anxiety, I was elevated into the sphere of Heaven, and thus into the state of perception respecting Eternity which is enjoyed by angels. I then was enlightened to see that Eternity is not to be thought of from Time, but from State [Statically], and that then a perception can be attained of what from Eternity is; which, accordingly, I then experienced." (1) It would seem, therefore, if we admit both of these ideas, that, as betrreen Space and Time, there is in the last Analysis, Corvertible Identity (t. 89), or that at least, they are inexpugnably united (t. 226); as are their Analogues, Knowing and Feeling, as Ferrier has demonstrated.
30. Swedenborg does also, indeed, by Implication (though nowhere explicitly) exhibit a partial sense of the doctrine above stated, namely, that the First Analogy of Space is with Permanent Faculty, whether of Knowing or Feeling. He says in the Arcana Coclestia, (No. 2625), that "In the Spiritual World there is neither Space nor Time, but instead thereof States, and that States in another life correspond to Space and Time in Nature: to Space States as to Esse, and to The Stetes as to Existence." In Heaven and Hell, (No. 154), he defines the word "States," in respect to Love and Intelligence, (Feeling and Knowing), and makes it apply equally to both. But the most important passage, relating to this recondite subject, which I have met in the writings of Swedenborg, is found in his treatise on the Athanasian Creed, (No. 45), and is as follows: "All Activities are changes of State, and Variations of Forv." "The Latter [Varietions of Form] are derived from the former [Changes of State]. By State in Man we mean his Love; and by Changes of State the Affections of Love; by

Diagram No.lo.
[Read from below upwards.]
Form-Analogues of ARI.


Fig. 3.


Fig. 2.


Fig. 3.


Fig. 2.


Fig. 3.


Fig. 2.

Fig. 1.
Form-Analogues of SCIENCE.

Fig. 1.


Fig. 2.


Fig. 3.

Form-Analogues of NATURE.

Fig. 1.


Fig. 2.


Fig. 3.
513. At the Left-Hand of the Departments of Nature and Science, in the above Diagram, and at the Bottom of the ArtDepartment, we have the Simple Curve, the Simple StraightLine, and the Serpentine, respectively, (Figures 1), as the Elementary Types of Nature, Science, and Art, respectively. To the right of these, and midway, in the First Two Departments, and next above, or midway, in the Third, (Art), (Figures 2), are the Types of the Abstractismus of the Elaborismus,-

Form in him we mean his Intelligence, and by Variations of Form, his Thoughts; the Latter [Thoughts] are also from the Former [Affections]."
31. Observe, in the first instance, that the word State is here confined to a special sense, and applied to the Feeling-Side of the Mind only, contrary to the larger definition just quoted above. Observe, in the next place, that Love and Intelligence, (Feeling and Knowing), as Permanent Faculties or Instrumental Conditions of Mind, are here carefully discriminated from Thodghts and Affectrons, as the Activities and Operations of those Faculties. Love and Intelligence, in this sense, are therefore, it is obvious, Static or Stationary Aspects of Mind, and Thoughts and Affections Dynamic or Moric; but all Statism requires Space, and all Motism requires Time as the Conditions of their Being. It should, therefore, be added as the Natural Corollary of these Statements of Swedenborg, and as the Explicit Doctrine of Sciento-Philosophy: That Love and Wisdom Conjointly, and as Permanent Faculties of Mind, Correspond Repetitively with Space, and that Affection and Thought Conjointly, and as Successional Procedures of Love and Wisdom, Correspond Repetitively with Tine. These fundamental discriminations are obscured by Tulk when he takes Love from one of these pairs, and Thought from the other, and reduces the fourfold difference to a simple duplex one. Swedenborg himself, in his ordinary utterances, does much the same, and nowhere radically explores the doctrine.
32. It must be added, then, that Space and Time in a real External way, and their Analogues in the Spiritual Domain, undergo Subdivisional Orders of Development, echoing to this Primitive Distribution repetitively, but yet inversely to each other, as a Man and his Image, seen in a glass, in a sense repeating, and in a sense antithetical to each other, and that it requires the most cautious and exhaustive Scientific investigation-not merely a broad generalizing appreciation-to found a System of Laws and accurate reasoning upon these Correspondences.
33. To illustrate: Swedenborg affirms, in the last preceding extract, as if without the possibility of contradiction or Counter-Aspect, that "Variations of Form" are derived from" Changes of State," and so that "Thoughts" in the Intelligence are derived from "Affections" in the Love, or Feeling-Side of the Mind. Now this is a complete begging of the whole question in dispute between the Experientialists and the Transcendentalists in Philosophy, and curiously enough places Swedenborg essentially among the Former, or on the Materialistic Side
the Ex-plan-atory Realm; and quite to the Right, in the First Two Departments, (Nature and Science), and at the Top in the Third Department, (Art), (Figures 3), we have the Types of the Abstractoid Concretismus, the Department of Practical Illustrations.
514. Observe, in the next place, that all of the Figures in the Department of Art are Compositions, in different degrees of Complexity, or in different modes, of the Privciple
of Philosophy, notwithstanding the general position I have assigned to him as a Pure Idealist. He is indeed a Pure Idealist so far as Pure Idealism of the Old Naturo-Metaphysical character could go, for it could not save itself from falling iuto contradiction; but the Pure Idealism of the New Sciento-Philosophy is of a different order. It goes up, analogically, from the Chest or Breathing-, or Mere Spiritual Region, to the Head and Brow, the Idealistic Region properly so called (c. 8, t. 9).
34. To illustrate still farther: "Variations of Form" (if, as here, distinguished at all from Changes of State) means Varieties or Different Types of Form, or Different Form-Types-Statoid. Now it is the Pure Idealism of Plato, (a Semi-luminous Conception prophetic of the clearer ideas of the-ScientoPhilosophy of Integralism), that the "Ideas," or Primitive Type-Forms of Being, are eternal or underived, the only things, incleed, which are so; that they are, at all events, prior to any and all Changes of State, (the Processes of Creation), and are causative of them; these Changes of State derived, therefore, from the Varieties of Form, (in Pure and Perfect Ideal), and solely taking place in order to conform to them. This is then a complete reversal of the Statement of Swedenborg. Or if we take, instead, Thoughts and Affections: Swedenborg affirms that our Thoughts are all, and in all senses-for he does not discriminate, or limit the assertion-derived from our Affections. This is true, undoubtedly, in the merely Natural Order and Aspect of the Subject, and after we can be said to have any Affections; but the Logical Order of the Evolution is just the Opposite. How can we have any Affection whatsoever for any thing which is not previously thought of, or first in the Mind as a Thought? Is it not this Thought in the Mind which first calls out, and, as it were, creates the Affection? Are not the Affections therefore derived, as it were, wholly, from this point of view, from the Thoughts; which is again the exact recersal of the Statement of Swedenborg? The reader is referred to the discussion of this same Subject in a previous Commentary (a. 1-7, c. 32, t. 136).
35. What, then, is the Sciento-Philosophic Doctrine on this Subject? It is that it is alike true that Varietics of Form are derived from Changes of State, and that, contrariwise, Changes of State are derivecl from Variations (Verieties) of Form; that it is alike true that the Thoughts are derivel from the Affections, and that the Affections are derived from the Thoughts; as it is alike truc that Men are
of Nature and the Principle of Science, conjoined or blended with each other ; that is to say, that the Third Department, that of Art, is derived from the two Departments of Nature and Science, as its Elements or Factors; thus: The Hogarthian Line of Beauty is compounded of Curvature and Straightness, as shown more in detail below (t. 520); etc. The Columns on the Left of the Art-Department are derived from the combination of Roundness and Squareness ; the Pyramidal
derived (or descended) from Women, and that Women are derived (or descended) from Men, or that the Chicken is derived from the Egg, or the Egg from the Chicken. (c. 31, 32, t. 136).
36. The Philosophical Doctrine of Swedenborg, coming with a claim of Divine Authenticity, a " thus saith the Lord," is, nevertheless, like every other System, hitherto, a Half-Truth merely; and all Half-Truths, or Part-Truths, are, from the larger and Integral Point of View, Falsities. Taken for the whole Truth they are the Standard Fallacies of the Human Mind. Taken for what they are, as Parts of the Truth, and then integrated by the aid of a radical Universal Philosophy, they are as true as they are otherwise false; and certainly, in this sense, there has never been made any single more magnificent contribution to the construction of the Entire and Final Temple of Truth than is contained in the Elaborate and Profound Religio-Philosophy of Swedenborg. I am too greatly indebted to him, I feel too lovingly and veneratingly towards him, to say willingly any word disparagingly of him, beyond what the stern behests of an honest criticism imperatively require. In my judgment, many of the very best single Minds are held captive at this day by the subtle fallacies of Swedenborgianism, and hindered of higher progress, while I am just as certain that as many thousands would be immensely benefited by being inducted into those same doctrines.
37. It was stated above that the ordinary Swedenborgian view of the Analogical relations of Space and Time to the Grand Divisions of Mind are defective on the score of their relation to the Motic Aspect of Being as one-half of the whole Domain merely. This, however, is not always the case. The relation, when Swedenborg speaks, is often, on the contrary, to the Static Aspect of Being; but then to this also as a Half,-the other Half merely; so that in either case the discrimination adduced is subdivisional, and therefore not Primitive or Radical. Indeed, the only reasons assigned by Swedenborg for the statement that Space corresponds with Love, and Time with Wisdom, are derived from this Static Hemisphere of the subject. They are that we instinctively speak of those who are in friendly affection as near to each other, and when the affection cools, as distant-Nearness and Distrnce being terms which belong to Space. Similar reasons are, or may be, adduced with respect to Time and Thought. This is as if we were to discriminate Space itself from the

Figures, while composed entirely of Straight Lines, have in them, nevertheless, representatively, the Principle of Roundness, by virtue of the Convergency and Divergency of the Side-Lines, like the Radii of a Circle, contrasted with the Side-Lines; of all Square Form which are parallel to each other. Finally, the Semi-Oval Figures at the Right are the Resultants of still further combinations and interblendings of Rotundity and Squareness, such as will be elaborately demonstrated elséwhere.
515. The Principle of the Modification and Blended Har-

Cut-Cp of Space by Lines, and make this $C u t-U_{p}$ to correspond with Time, in accordance with the Etymology of Time as derived from the Greek Temno, то cut or divide. All this, if we confine ourselves within the Static Aspect of the subject, and are engaged in the subdivision of it, is quite true and important; but it will now be easily seen that there is a prior distinction between the whole Static and the whole Motic Aspect or Domain, and that in this larger discrimination both the Space itself and its Cut-Up by Lines are to be recognized as Spacic or Spacioid, if the idea of Change or Movement is excluded, and if the Lines are therefore permanent; and that the idea of Time attaches only to the Act of Cutting-Up-that is to say, to the Process or Operation.
38. Many things have been presented by anticipation in this Commentary which will be found discussed more in extenso, sulssequently in the Text. It seemed necessary, however, in this connection, to make this statement, even at some risk of its seeming obscure, for the want of necessary explanations.
39. A word now in respect to the alternative Figures in parenthesis in the Art-Line of the Table No. 1, c. 9, t. 503. These are $3+1,7+1$, and $12+1$. It is the Peculiarity of Art, and so of the Trinismus universally, that it tends to a doubleness of development, which repeats, as it were, the two Elements from which it is clerived, (the Unism and the Duism), so that there is a voavering between the Aspect which presents the Subject as threefold, and that which presents it as fourfold. This tendency to Bifuroation in Art expresses itself in a Series, at the End, or, as it were, in the last link; as, for example, in the Dubitation whether an Octave in Music consists of 7 Diatonic Notes or of 8 ; whether, in other words, the $D o$ of the next octave above is to be reckoned in or reckomed out. There is an Overlapping at the Extremities of the Successive Octaves. This same Principle, Semi-expression or dubiousness of claim, prevails in the Musical Scale, somewhat beyond where it has been accurately described. The 8 Tones divide equally into two Serial Wings, a Loreer and an Upper Wing. Each is composed of Three Whole Tones, and a Semi-Tone at the End of the Serics; Thus, Do, lie, Mi (Whole Tones), Fa (Semi-Tone).-Lower Wing: Sol, La, Si, (Thole Tones), Do (Scmi-Tone)-Upper Wing. Each Wing may be said to repre-
mony of the Primitive and Typical Forms, Round or Square, which they undergo in assuming the more Tasteful and Graceful Varieties of Form which pertain to Art, is properly formulized, and will-be copiously referred to, as the Principle of

## Artistic Modification.

516. It will appear, on a slight examination of this Diagram, that Perfect Roundness-ROTUNDISM, of which the Arc of a Circle-the Simplest Form of a Curve-is Elementarily Representative, has been assigned to NATURE, as its Analogue or Type ; that Straightivess-RECTISM-of which the Simple Straight Line is the Lowest Representative, is assigned, in like manner, to SCIENCE ; and that Forms compounded and modulated from these two-MODULISM—are assigned to ART. The mere Exhibit and Statement to this effect are so striking that to many minds they will carry their own conviction ; the proofs, however, of the accuracy of this Distribution will rapidly accumulate with the further consideration of the subject.
517. The Simplicity of Nature, with yet the entire absence of that Exactness and Precision which belong to Scientific Abstractions, is symbolized by the Circle, which, while it has its own simple Unity of Constitution and Curvation, refuses,
sent, numerically, $3 \frac{1}{2}$. The Diatonic Octare may then be represented by $7 \frac{1}{2}$ (the first Semi-Tone raised to the ralue of a Full Tone); and the Chromatic Scale by $12 \frac{1}{2}$. These Numbers may now be substituted for those contained in the Art-Line of the Table ( 3 or $3+1$, etc.) There is in this Halfness added to the body of the Series taken as One an Echo of the Principle of Sesquism, One-and-a-Halfness (Lat. Sesqui, One-and-a-Half).
518. In Natural Joinings, there is an Indeterminate Orerlapping, as between the Valley and the Mountain: in Scientic Joinings there is a Sharp Line of Separation and Contact, with no Orerlapping whatsoever; and in Artistic Joinings, as here in Music, there is a measured and proportionate Overlapping, so that the Transitional Link, while distinct and determinate in itself, is still dubious in respect to position. It may be assigned to either of the Series between which it occurs; to both of them; or to neither, according to the fiew which is adopted.
nevertheless, absolutely to be measured by the rigid Straightness of the Square. The Quadrature (Squaring) of the Circle is mathematically impossible ; and it is the catchword of Artists, That Nature has no Straight Lines; while yet both Nature and the Circle are instinctively accepted as Types of that Unity and Simplicity which are sometimes, though not with entire accuracy, denominated Regularity.
519. True Regularity is, on the other hand, the Distinctive Characteristic of Science. This is typically evinced only in the Exact Sclences; for it must still be borne in mind that The Natural Sciences, to which we now may add Art also in so far as it is Scientific, fall within the larger meaning of the term Science, as contrasted with Crude Nature.
520. Regularity is Straightness. The Rule or Ruler (Lat. Regula, a Rule) is the Type of Regularity. (The Latin Rego, I rule, is the Cognate Verb, and gives Rectus, whence Right, which we apply to a Line instead of Straight). Rigor is also a cognate term. The Typical mode of procuring Straightness, and hence Regularity, is by Stretching or Drawing out. To drazo out, is to abstract (Lat. Abs, From, and trahere, то draw), and The Abstract is the Domain, especially, of Exact Science. Stretching is Cognate with Strictness, Strain and Straightivess or Stretchedness. Exact is the same idea, with a different mode merely of producing the Straightness. It means Driven out, (Lat. Ex, From, and agere, to Drive), the result being the same, namely, to produce Straightness. Regular, Straightened, or Exact Form, is, therefore, ScienceForm, as Round Form is Nature-Form. Rectism, in other words, is Scientism, as Rotundism is Naturism. The Simple Straight Line is here the Elementary Type, as The Simple or Elementary Curve (the Arc of a Circle) was so in The Former Case.
521. Artism is the Blended Composity and Result of Naturism and Scientism, variously combined. The Simple Elcmentary Form-Type of Art,-the Primitive Representa-
tive of Estheticism or the Sense of Beauty in the Domain of Form-is The Serpentine Line, familiarly known as Hogarth's Line of Beauty (Dia. No. 10, t. 512, Art, Fig. 1). This by reflexing the Simple Curve retains the Principle of a Prevailing Straightness in the midst of Simple Curvism ; or, symbolically, it inserts the Rigor and Rectitude or Precision of Science within the Tendency to Continuous Deviation or Reguloid Irregularity, characteristic of Nature. Deviation is from the Latin de, fron, and via, the Way; a changing of Direction which, when Continuous, is Curvature, or Curvation. The following Diagram will illustrate what is here said of the Unition of the Two Mere Elementary Principles in the production of the Mikton of the Third:

522. To repeat, then,-at a point where the intrinsic importance of the subject demands every amount of emphasis which repetition can give,-The Simple or Elementary Curve is the Primitive or Elementary Form-Analogue of Nature, (as the Domain of the Natural Sciences) ; The Simple Stratght (or Straight Line) is the Elementary Form-Type of Science, in the Exact Sense of the Term ; and the Simple Serpentine (Hogarth's Line) is the Elementary Form-Type of Art and Beauty. The Simple Curve is then Representative of All Roundness ; the Straight Line is in the same sense Representative of All Straightness (as of The Square, The Cube, etc.), and the Simple Serpentine is so of All Interblending-and-Composity-of-Roundness-and-Straightness, in the production of a Reconciliative Harmony of Form, and of that Satisfactory and Pleasurable Combination of the Freedom of Nature and the Regularity of Science (or Rigorous Abstract Truth) which we recognize instinctively as Beautiful. All Beauty, and
hence Art, is the Result of a judicious Compromise between the Wild License, or else the more measured but still easygoing Freedom of Nature, and the Rigorous Exactitudes of Scientific Abstraction; which last is repeated in the Moral Sphere by Straightness and Uprightness of Conduct, which is then called Justice, Equity, Rigiteousness, etc. Trutii (for Through-th, that which goes through, or centres) is a term applicable in any domain. Truth of Feeling is Virtuous Sentiment ; Truth of Knowing is Science ; Truth of Conduct is Virtuous Action.
523. The beginner in Universology will be liable to stumble over the fact, that Nature has within herself, as studied scientifically, Specimens of all the Varieties of Form, as in the Rotundity of the Planet, the Cubosity of the Salt-Crystal, the Blended Beauty of the Landscape, etc. ; and so of Science, and so of Art. The solution of this difficulty is in The Inexpugnability of Prine Elements (t. 227), and in several Modifications of that Principle, some of which will be supplied in what soon follows below, with distinct Formulæ. Far short of Convertible Identity (t. 89) we discover practically that there is a Sense in which All things are Contained (as to the Principles of their Constitution) in All Things Else. There is, in other words, Subdivisionally, a Department within Nature which is espectally Characterized by Naturism; and this is the Governing Aspect or Department there ; there are, however, two other Subordinate Departments, also within Nature, which are Scientoid and Artoid, respectively. There is then within Science (or the Scientismus) a Department which is especially characterized by Scientism; and this is here the Governing Department ; while, nevertheless, there are two remaining Subordinate Departments, which are Naturoid and Artoid, respectively; and so also, mutatis mutandis, within the Artismus.
524. Within the Naturismus, the Scientismus, and the Artismus, respectively, The Princtple which is at home there dominates, and is called the Dominant of the Domane,
while the two remaining Principles which are borrowed from the other Domains are Subordinant in function there, while they each appear as Dominant if we transfer ourselves to the Domains where THEY are respectively at home. Within any given Domain, Every Thing converges, and hinges, or pivots, upon the Domifant of that Domanf; the other Principles which, while present, are still, as it were, subjects or foreigners, conform to the Governing influence of the Dominant. They are, in other words, Loyal to it. This somewhat Intricate but Important Doctrine is expressed in the following Formula, which will be from time to time invoked, furnishing abundant illustrations of the Principle, namely:

## Lofalty to the Dominant of the Domann.

524. When either of the Subordinate Principles within any Domain, although Subordinate, still assumes comparatively $a$ Somewhat Governing influence or position, it is said to be SubDominant. It will be shown elsewhere that even Unism, and Duism are so inexpugnably united or interblended, that in Unism there is always a minor or sub-dominant portion of Duism involved; and in Duism a minor or sub-dominant portion of Unism.

525̃. To illustrate this Interblending in Diverse Proportions, Swedenborg affirms that Man, Male, is a Type or Form of Intelligence or Wisdom, and that Man, Female, is a Type or Form of Affection or Love,-Wisdom being the Duism, and Love the Unism of this High Spiritual Domain ; but then he has immediately to explain that this is not, in such a sense, that Woman is without any portion of the Principle of Intelligence, nor Man without any portion of the Element of Lore. In other words, what is meant then is, that Intelligence predominates in the Man, and Affection in the Woman. Indeed, if we assume that, of the two Principles named in such a conjunction, the one first named is dominant, and the following one sub-dominant or minor, then putting 2 for Intelligence or

Wisdom, and 1 for Love, the Constitution of the Male Character, as here conceived, may be denoted by the Mathematical Expression $2+1$; and that of the Female Character by $1+2$. In the Absolute, it may then be said that the two are identical, and that in the Relative only do they differ.
526. In Universological Technicality it would be said that Intelligence and Affection are inexpugnably united as Prime Elements in the Constitution of Mind itself, Male or Female, and that there is then a Mere Preponderance in a mathematically measured ratio of the one or the other of these elements in the particular composition which furnishes the Masculine or the Feminine Type of Mind, respectively. Preponderance is here represented by the greater or leading prominence of the Number first mentioned. This idea of Overbalance in a measured degree is so important as to require its own definite Formula, and will therefore be alluded to as the Principle of

## Mere Preponderance.

527. Any two Principles, Elements, Domains, or Factors, which are separated and contrasted with each other, as if they were wholly distinct from each other, while we treat of them as Pure Abstractions or Ideals, are, in the Actual or Concrete World, intermingled or inexpugnably combined, so that when we speak of a given Principle or Element, in Concrete, we no longer mean it as it was in a Pure, Abstract State; we mean, instead, a Composity or Combined Substance of Principles or Elements, (a Mikton), within which the one mentioned merely preponderates. It is thus that in the Abstractismus only, do we have Pure Discriminations, which are then always Ideal or Fictitious, even though indispensably useful ; the Basis, indeed, of all Pure Science. Everywhere within the Concretismus, on the contrary, that is to say, throughout the Actual or Real World, or the Total Realm of Nature herself, we meet the Overlapping of Principle upon Principle, Element upon Element, and Domain upon Domain. Here it is that we can
never fix precisely the point at which the valley ends, and the mountain begins. This Fact or Principle of all Concrete Existence will be referred to under the Formula :

## Overlapping. c. 1.

528. The Inexpugnability of Prime Elements, Mere Preponderance, and Overlapping, are, therefore, three important Secondary Principles and Formulæ of Universology closely related to each other, and which will often be mentioned in connection.
529. Let us return now to the discrimination between Determinate and Indeterminate Form. Indeterminate Form, we have seen, covers the same ground, analogically, which is Elementarily distributed numerically by the terms One, Many, All. Determinate Form should then have an equally Elementary Distribution, holding an echoing relationship to the equally Elementary Distribution of the Spirit of Numbers as allied with the three Head-Numbers One, Two, and Three (t. 206) ; and inasmuch as Determinate Form has one Primitive Distribution, as we have just seen, echoing to the Distribution of the Universe into Nature, Science, and Art; it should result that the One, Two, and Three, should al.so echo to Nature, Science, and Art, respectively. This Prognostic of Science we shall find, on examination, amply confirmed.
530. The Form-Analogue of the Numerical Unit is the Point. This is so obvious that it needs not to be demonstrated. But as both Point and Unit are abstract, the Point, to denote the Unit is made Thin or Light. The Thick or Heavy Point

[^71]is then the Analogue of the Concrete Item, Object, or Thing, of which the Unit is the Abstract Ideal Representative. The Form-Analogue of Two Units is, accordingly, Two Points ; of Three Units, Three Points, etc., on to Infinity.
531. But when two Points are posited in Actual Space or in Thought, or two Units in Thought, there is immediately another Element, a somewhat more than the Mere Points, or Units, involved. The MFind necessarily Supplies a ThoughtLine trarersing the Real or Ideal Space intervening between the two Points, or the two Units Connecting them by this Ideal Relational Intervention into an Elementary Figure or Line. If only one Point is posited, the inferential presence of the LineElement is less obvious, and we may, for the present purpose, omit its consideration (a. 38, t. 198, 486).
532. For the Spirit of the Number One, (Unism), as well then as for the Simple Unit as such, the mere Point is still the Appropriate Analogue in the Domain of Form ; but for the Spirit of the Number Two, (Duism), (which Spirit is itself a Unit, notwithstanding the Dual Constituency of the Sum, Two, a Unit of Intervening Relationship between the two Separate Units), the case is different. It is not twoo Points, but a Single Straight Line which is here the Appropriate Ana-logue-Straight, because, in the absence of any Motive or Cause of Deflexion, Straightness aș the Simplest is the Typical Form of the Line. The Straightness of the Line is, therefore, due to, and an instance of, the Tendency to Equation defined in a following Paragraph (t. 535). The most Elementary Morphic Analogues of Number, those which echo directly to Unism and Duism, and more remotely to The Head-Numbers One, and Two, are, then, The Point and Line; as seen in the Diagram below.

Diagram No. 1 ®.

Floure 1.

- One or 1 ; (Unism).

Figure 2.
_— Two or $\mathbf{2}$; (DUTSM).
533. If another Unit be added, Two Lines and one Point are the most Elementary (or incomplete and fragmentary) Representation of the Spirit of the Three, which is the resulting Number, as shown in the following Diagram :

Diagram No. 13.

534. More fully or determinately expressed, the mere Angle (Fig. 3, Dia. 13) becomes an Equilateral Triangle; the Three Points representing the Three Units, and the Three Intermediate Lines of Conection between them being in this case all preserved. The Points are placed at Equal Distances from each other ; for if Three Points were to be posited in Space (or Three Units in the Imaginative Mind-Space) they would most simply and naturally arrange themselves in this manner, (at Equal Distances), in the Absence of any special Cause or Motive soliciting or requiring them to assume a less simple or less regular relationship. They present, therefore, the Figure shown in the following Diagram :


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    Diagram No. l4.
Form-Analogue of Determinate Trinism, or, in a General Sense, of the Number Three or 8.
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535. This Principle of Adjustment by which the parts of a Figure arrange themselves in the Thought,-and then by a Fundamental Principle of Universology, in the Actual Organizing Processes of Nature also (t. 000),-in the Simplest and Most Regular manner, is an Instance, and, indeed, The Typical, Most Analytical and Most Elementary Instance of The Law of Greatest Simplicity often assumed and adverted to by all Scientific men, and which has been formally elimi-
nated by Comte, and made the First in the Catalogue of his "Fifteen Universal Laws" (t. 455). As another name for this Law, more expressive in respect to its application to the production of certain Typical Figures, and their Analogues, I denominate it

## Tendency to Equation.

536. If four Points or four Units be posited, under the Limiting Condition that they be in the same Plane, this same Law, the Tendency to Equation, will prescribe that they and their Interposed Lines shall constitute a Square. Quadrature or the Square is, therefore, the Morphic Analogue of the Number Four, as has been previously stated (c. 10, t. 503).

Diagram No. 15.

537. But if now we remove the Limiting Condition (t. 536), and allow the Points to arrange themselves in Absolute Freedom, and, hence, in any Plane, the Figure which will result will be the first of the Simple Solids, as shown below.

Diagram No. 16.

538. Observe now that the Equilateral Triangle is the Simplest Figure which can embrace an Area of Surface, and
that the Equilateral Pyramid is the Simplest Figure which can embrace a Volume of Geometrical Solidity ; and Geometrical Solidity is, it is obvious, the Analogue of Real Solidity or Actual Substance. A Cube ideally constructed in Pure Space is an echo to the Real Cube cut in wood or metal, etc. On the contrary, the Point and Line embrace neither Area nor Volume, while yet they are more Elementary than either Surface or Solid. Point and Line belong, then, to the Elementismus of Form; Surface and Solid to the ElaboRISMUS.
539. In fine, The Point is representative of position ; The Line, of Extension; The Surface, of Figure ; and The Solidity, of Symbolic or Schemative Reality; or thus:

$$
\text { TABLX } 36
$$

| 4. Solid | (Schemative) Reality. |
| :--- | :--- |
| 3. Surface | Figtre. |
| 2. Line | Extension. |
| 1. Point | Position. |

540. Position, Extension, Figure, and Schemative Reality, are the four Fundamental Grand Divisions of Form. A Porvt posited in Space is the Type and Symbol or Representative of Position It is, in fact, the very Definition and Ideal of Position itself. The Straight Line is the same Elementary Type and Representative of Extension Universally. But the tendency of Duism to split into a double manifestation has been previously indicated (t. 281). The Straight Line is readily conceived of as Two such Lines, the one coaptated or applied to the other, one or more times, and so, by the Comparison, ascertaining the Quantum of its Extension. This Quantum of Extension is Measure. The Giren Line, the Line as a Standard and Instrument of Ascertaining Extension, the Line as a Rule, is The Analogue and Representative of Measure. Measure is the Quantification of Extension.

Every Variety of Measure, (even Wet Measure, Weight, etc.), is reducible, as its own standard, to Linear Measurement. The Given Straight Line is typical, therefore, First, of Extension, and Secondly, of Measure. It is the Unit of Extension and Measure, as the Single Point is the Unit of Position. The Equilateral Triangle is, in the same manner, the Unit or Least Instance of Figure, and the Tetrahedron the Unit or Least Instance of Rectalineoid Solidity, and of that which Geometrical Solidity represents, which is Symbolic Reality.
541. But the Single Numerical Unit, the Number One, or (1), represents, corresponds with, echoes to, or repeats The Point, and, hence, represents, corresponds with, echoes to, or repeats Position. Assign to each particular Unit a Real Value, give to it not merely a Schemative or Symbolic, but an Actual Solidity, and it becomes an Item of Real Being ; in other words, an Object, a Thing. The most Obvious and Typical Object or Thing is the Planet; Heavenly Orb, or World. Things, in the Plural, are the Aggregate of such Worlds. a. 1. These are Nature or the Cosmos. Singly, but enlarged by Proximity, our Earth is such a Thing or W orld, and is, hence, for us the Aggregate or Body of Nature. This World, and still more largely The Universe as a One World, (Lat. Unus, One, and verto, то tUrar), and either as Natupe, is represented by the Single Numerical Unit. The Single Numerical Unit, or the Number One, (or 1), and specifically Unism, the Spirit of Onfe, is therefore the Type, Analogue, or Representative of Nature; quod erat demonstrandum. In other words, The Unit in Number, and Uxisir, derived, as the Fundamental Principle of All Being, from the Unit; The Ponst in the Domain of Form, and, hence, Position, universally ; and finally The World, and Nature, are Repetitive Analogues of each other.

[^72]542. So again, DuISm, the Spirit of the Number Two, (or 2), represents, corresponds with, echoes to, or repeats The Line, and hence represents, corresponds with, echoes to, or repeats Extension and MEASURE, or Measurement of all Kinds. Science is the Intellectual Measurement or Exactification of the Universe of Real Being, which last is Nature (a. 2, t. 86). Duism is, therefore, the Type, Analogue, or Representative of Sctevce, as Unism is so of Nature; quod, iterum, erat demonstrandum. In other words, Duisn, derived from Two, the Ruling, Regulating, or Governing Principle of All Being, (as Unism is the Fundamental or Basic Principle) ; The Straigit Line in the Domain of Form, (Regula, Rule, Ruler), and hence, Extension and Measurement or Quantifying Certainty ; and finally, therefore, Science, (as contrasted with Nature), are another set of Repetitive Analogues of each other.
543. In fine, Trinism, the Spirit of the Number Three, (or 3), represents, corresponds with, echoes to, or repeats Surface, and hence, represents, corresponds with, echoes to, or repeats Figure or Shape, as the Third and Supreme Stage of Development in the Domain of Form. Form itself is often used to mean no more than mere Figure. Art is the Shape-liness or Come-liness of Being. Compare the Latin forma, Form, and formositas, Beauty (the Spirit of Form or Figure). Trinism is, therefore, the Type, Representative, or Analogue, of Art, as Duism is so of Science, and Unism of Nature; quod erat demonstrandum. In other words, Trinism derived from the Number Three, (or 3), is the Combining, Reconciling, and Integrating Principle of All Being, as Duism is the Regulating, and Unism the Fundamental Principle; the Limited Area of Surface, (the Face or Presentation of Being), and hence, Figure; and, Finally, Art, as the Realm of Beauty, are a third set of Repetitive Analogues of each other. The following Table resumes these several Analogues:

TABLE 37.

| 3. TRINISM | Surface | Figure | ART (Being). |
| :--- | :--- | :--- | :--- |
| 2. DUism | Line | Mieastre (of Extension) | SCIENCE (Form). |
| 1. UNISM (or Unit) | Point | Position | NATURE (Substance). |

544. The Geometrical Solidity, here omitted, being not Reality or Substance, but only Schemative or Symbolic Reality, is still, therefore, within the Domain of Figure. It is only that Aspect or Department of Figure which repeats, or echoes to, Reality or Substance-for in every Department of Being, all other Departments are represented by some interior Subdivision or Portion of the given Department.
545. Substance embodies the Goodness or Value of Being. The Substance of the Land is the Fat of the Land. A Man of Substance is a Rich Man, -one possessed of Goods. Substance, and hence, Nature, correspond, therefore, repetitively with Good or The Good. Science corresponds in like manner with Trutif or The True, and Art with Beauty or The Beautiful. This relationship is exhibited tabularly in the following arrangement:

TABLE 38.

| 3. Trinisiy | The Surface | Tife Artismus | The Beautiful. |
| :--- | :--- | :--- | :--- |
| 2. Duism | The Line | The Scientisnus | The True |
| 1. Un sm | Tie Point | The Naturismus | The Good. |

546. We incur now, however, some seeming contradictions. It was stated and shown above that Roundness is the Analogue of Nature, and Straightness the Analogue of Science (t. 516), whereas now the Point appears as the Analogue of Nature, and the Straight Line (merely) as that of Science. So also once the Serpentine or Line of Beauty has beeu given as the Analogue of Art (t. 520), and again here, Figure or Surface, has been made to functionate in that capacity (t. 543). These apparent inharmonies are only apparent, however, and
are readily reconciled, as follows: The Point is itself Essential Roundness ; or the least Element of Roundness, precisely as the Minim or Least Extension of the Straight Line is Essential Straightness, or the Least Element of Straightness. The Point is, in other words, the Monad or Starting-Point of Development of all Rotundity ; as the Minim of Straight-Line is so of all Rectism or Rectification whatsoever. The Point and Line (typically the Minim or Least Quantum of Linear Straightness) are therefore the Residua or Resultants of the Last and Lowest Analysis of Form, and hence, conversely, they are the First or Primitive Elements of all Morphic Construction whatsoever ; and as the First Grand Divisions of Form (Unismal and Duismal, respectively) are Roundness and Straightness, so the Point and Line are most elementarily representative of these two Grand Divisions of Form, respectively, and consequently of whatsoever they represent in other Domains; and hence, of Nature and of Science especially.
547. The Point, if the slightest Expansion is allowed to it, if it be permitted, in other words, to take on Dimensions at all-and it always does so Really, even in our Thought, however we may define it in Theory, since Abstraction is never Absolutely accomplished,-is a Little Globe, the Face and Outline of which are the Area and Circumference of a Circle. If the Circle be then cut into Segments or Arcs, as we cut the otherwise infinitely extending Straight Lines into Measures, or Given Straight Lines, we have The Smiple or Circulord Curve, which, in the Relative or Actual, we are now authorized to substitute for the more Primitive and Absolute Point, as the Companion and Antithet of the Given Straight Line. It is then the Minim of such Curve which is the True Antithet to the Minim of Linear Straightness.
548. The Mikton or Mingle of the Circuloid or Simple Curve with the Typical Straightness is then the Serpentine, which is, therefore, in like manner, the Elementary Type of Art, while yet Figure, Universally, which has in it, inherently and inex-
pugnably, the two Elements of Roundness and Straightness, (Point and Line), is the Higher Elaborate Analogue of Art. Each of these Diversities in the Modes of the Manifestation of the same Principle signifies a corresponding and intrinsically important difference in Basic Philosophy, or in the Science of the Universe. Each one of these is a pregnant and significant Hieroglyph of the Infinite, fraught with a portion of the meaning which pertains to the most exact Science. It is a mere glimpse of the subject which is compatible with the narrow dimensions of an Introductory Work.
549. It may be stated, in passing, that the Point, in the Domain of Form, is an Analogue of the Vowel-Sound, (the Single Impulse or Monad of Utterance), and the Line the Analogue of the Consonant-Sound, (the Limit on the Vowel), in the Domain, and in the Elementismus of the Domain of Speech; and that the Surface or Aspect-View of Form is the Analogue of the Adjective or Predicate, and Solidity, (the Reality-, or Substance-View), the Analogue of the Substantive in the Domain, and in the Elaborismus of the Domain of Speech. (Str. 0). The merely Geometrical Solidity, however, given by the addition of the Dimension of Thickness to mere Surface, but still with no real Value or Substance, is the Analogue, specifically, of Abstract Noun-Substantives, as Virtue, Vice, etc. It was the observation of Kavenaugh, a Philosopher and Discoverer in Linguistic, of the last century or the beginning of this, that the $A b s t r a c t$ Noun-Substantive is a true Adjective carried, as he shrewdly avers, to the Fourth Degree of Comparison. It means, he says, the Entirety or Fullness of the Quality or Property which the corresponding Adjectives (Virtuous, Vicious, etc.) signify in some Degree less than the whole.
550. Thin-, or Surface-Form is Abstract and Objective, as when we take ourselves out of, and aside from, the Object, and look at it superficially or Surface-wise (Lat. Superficies, a surface). So when we stand in front of a Globe, what really
meets the eye is a Level Surface surrounded by a Circular Limit. Thick-, or Solidity-Form (whether infilled with Real Substance or not) is Concreted with the Observer, and hence Subjective, as if the Observer were standing within and identified with the Real (or Ideal) Substance of the Object.
551. A Single Point posited in Space is naturally and necessarily surrounded by an Infinity of Blank Space extending outwards in all directions. The Point is then-in this Comparison with its Negative Matrix-the Analogue of Something, (the Least Something or the Least Monad or Elementary Constituent of Something), and the Surrounding Vacant or Pure Space is the Analogue of Nothing-the Something and the Nothing being the Primitive Constituents of Quality, -the Adjective Domain (t. 111). If then we practically limit this Theoretical Infinity, in thought, as we cannot avoid doing, somewhere ; if, in other words, we surround this outlying Nothingness or mere Space by a Limit or Boundary, we have, as the result in the mind, an Immense Globe of Space with the Posited Point at the Centre of it ; and, finally, if we now view this Immense Thought-Globe, (Posita-Negative), Abstractly and Objectively, that is to say, as if we could and did place ourselves outside of it, it will present itself to the Conception as a Circular Surface, to which also we commonly apply the term Circle. Surface generically corresponds, as we have seen, with the Adjective-, or Predicate-Domain (t. 549) ; the Domain of Faces, Facets, Aspects, Reflects, or Visual Presentations. Round Surface is then the Analogue of the Adjective in its Primitive or Positive Degree, (centring on the Posited Point). Square Surface is the Analogue of the other Adjective Degrees; thus: The Square is the Instrument of Superficial Measurement, and Measurement is effected solely by Comparison. But the Half-Square or single Right-Angle we are authorized, in a sense, to regard also as a Square. It is this that the carpenter means in a Concrete Sense when he speaks of the implement which he calls his "Square." The

Right-Angled Triangle, with one of the Legs of the Angle as a Base, is the Most Sciento-Fundamental Figure in all Geometry. It is the Lay-and-Standard Means or Instrument of all Complex Adjustment and Arrangement in the whole Domain of Form and Direction. It is the very Type (above the Primitive and Abstractoid Simplicity of the Parallel Lines) of Comparison, itself the great Scientific Idea. The word Comparison is etymologically, from the Latin con, with, and par, equal; and the two Legs of the "Square" are adjusted at Equal or Right Angles, as themselves Compared, and then as the means of Comparing other things.
552. The Square, so defined, really the lower Half of a True Square divided diagonally by a Hypothenuse, is the Analogue, in Form, of the Comparative Degree of the Adjective, in Grammar ; and then the Antithetical or Superior Opposed Half of the same Square is the Analogue of the Superlative Degree, in the Comparison of the Adjective. Superlative, from super, ABOve, and latus, a SIDe, means simply that which is above or on the Upper Side, or at the Top. The following Diagram exhibits these Analogues to the Eye:

553. Finally, Modulated Surfaces, partly Round and partly Square, and pre-eminently among these the Oval, as shown elsewhere, (t. 554), are the Analogue of Adjective Property, Abstraction made of the Particular Degree; or, in other
words, the Different Degrees blended, and their differences obliterated. The Geometrical Solidity which is an Ulterior Modification of this Figure,-mere Surfaces interposed in Space depthwise as well as expansively ; so as to represent and symbolize the Real or the Concrete Solidity ; the Eggshell, so to speakas a iurther Modification of Surface, is the Analogue, as we have seen, of Abstract Substantive-Nouns, or Kavenaugh's Fourth Degree of Comparison (t. 549). The surface Ovoid is the shape of the highest Type of the Human Face ; and the Solid Ovoid that of the Human Head, the Ultra-Superlative Parts of Man. . The Shell of the Egg is then the Representation of the Abstractness of Form, as the Limit upon, or the Container of, Substance. The Contents of the Egg are the Analogue of Substance ; the Yolk, Positoid, represented germinally in the Germinating Vesicle and Point ; and the White of the Egg, Negatoid, or the Analogue of mere Space as negative Ground or Medium.
554. But Round Form, it has been shown, is the General Analogue of Nature ; Straight, and especially Square Form, the Analogue of Science ; and Composite Form, the Analogue of Art (t. 516). Hence it appears that the Positive Degree of the Domain of Adjective Property is the Naturismus of the Adjectivismus, the Comparative Degree that of the Scientismus; (see Comparology, in the "Structural Outline," as the Typical or Ruling Form of Science) ; and the Superlative Degree that of the Artismus of the same carried up into greater fullnees of Expression in the Composite Entirety of the Egg as the Analogue of Incipient Completed Existence. By a Discrete Degree we then ascend to the Chick born of the Egg, the Analogue of which is the Completed Proposition in the Domain of Language ; or, in the Complexity of theVertebrate Organization, it is the Analogue of the Completed Argument, with threefold interlocking of Propositions (t. 578). The Fourth Degree, that of Abstract, Ideal, Modelic Substantivity, is then the Analogue of the Total Schemative Outlay of Real or Concrete

Being ; for, the Ideal Framework of Being is the Same, whether it is infilled by a real Concrete Content, or left vacant of all Reality.
555. If, instead of the Single Point, any Two Points be posited in Space, or in the Thought of Space in the Mind, there is immediately generated, by an Inherent Necessity in the Nature of Things, a Connecting Thought-Line between them ; and by Tendency to Equation (t. 535) this Intervening and Connecting Thought-Line is by the Same Inherent Necessity Straight, Straightness being the simplest form possible to it. Law, symbolized by the Line, is by the same Analogy inherently Co-existent with Relative Being or Existence, (Lat. existere, To stand out), symbolized by the one Point standing out from, or apart from, the Primitive Point,the First Step in the Creative Process of Being.
556. But the Process of Standing out, as that of Going asun$d e r$, is inherently and in last Analysis a Process of Motion. The Single Point we may conceive of, and do conceive of, as in a sense Stationary or Static ; but the differentiating of the Second Point from the First Point is a quasi-process of Parturition, Parting, or departing-the Incipiency of Movement. The New Thought-Line generated between the Two Points is a Track or Way along which the operation has proceeded. This Operation or Movement involves in turn the Idea of Tnme as the Continuity of Movement, or The Negative Ground of this New Phase of Being; whereas, the Single Point statically considered had had, for its Negative Ground, Space only.
557. Even though we assume the Standing-Asunder of the Two Points, as a mere Being-Asunder, the still precipitate of Phenomena after their primitive Going-Asunder, and so eliminate the idea of Motion from them, objectively considered ; still, in conceiving them, the Mind is compelled to traverse the distance between them over the Thought-Line of Comnection; and so the Conception of Motion is only transferred from the

Objective Points to the Mind within ; from being Objective it is made Subjective ; but Movement and Time are, nevertheless, equally involved.
558. But even yet the Lengthwiseness so generated in idea by the positing of Two Points in Space, while it involves and echoes to the idea of Continuity in Time, is not the Radical and Absolute Analogue of Time, as Duration. It is, primarily, mere Protension or Forthstretching in Space still, and an Analogue, as such, of the more radical, or the Truly Fundamental Duration, or Protension in Time. The Type of this Last Idea, that of Duration itself, is furnished, in the Last Analysis, by the Single Point, even prior to, or apart from, the positing of a Second Point in Space. The Method of it is this: The Single Point contemplated as Posited in Space, during a Single Instant of Time, as if the Flux of Time were arrested, is the True Analogue and Sole Type of Absolute Statism or Immobility. The Continuous Persistency in Immobility itself, so to speak, of the same Point, during two successive Instants of Time, or from One Instant to the IVext, is still Progression or Movenent in Time, which is thus the True or Primitive Lengthroiseness of Being. It is this Pure Static Duration which is echoed to, or repeated by, Lengthwise Progression, (or Protension, in Space), but which is not, nevertheless, to be confounded with it. Observe, however, again, that the Mere Continuance or Persistence of Being in or through Time, is, itself, by still farther Analysis, susceptible of a twofold Aspectual Presentation-Unismal and Duismal, respectively, so that the Continuance itselî is a Trinoid or Mikton ; thus: The Continuance as Persistence, viewed as pure unchanged Condition, is Duration strictly and properly so-called, and is Unismal by virtue of its being destitute of Variation or Difference ; but we cannot exclude the opposite view, namely that, by enduring merely, the Object. passes from one Instant of Time to the next, and the next ; and this transition is then Successiox. Duration and Succession
are, therefore, the joint factors of Existence in Time. Time itself is still different, namely the Negative Ground or Pathway along which the whole procedure occurs. The following Table resumes these several Components and Conditions of the Tempoid and Primal Elongate Constitution of Existence :

TABLE 30 。
Positive Elements $\begin{cases}\text { Movement or Motoid Existence } & \mathbf{3} \\ \text { Succession } \\ \text { Duration } & \mathbf{2} \\ \mathbf{1}\end{cases}$

Negative Ground-Time
-
559. Succession is also called Progress ; and Duration, or the Permanent, and as it were, regulative, Element is also called Order; hence the appropriateness of Comte's grave and significant Formula: "The Subordination of Progress to Order."
560. Otherwise stated the Flux of Time, or of Eventuation in Time, never is, in fact, arrested even for the One Instant of Time. Station is, therefore, inexpugnably co-existent and combined with Motion. Motion must, on the other hand, have a Point or Position at which to occur, and a Space (or the image of Space) extended, through which to pass. Viewed therefore Conversely, Motion is also inexpugnably co-existent and combined with Station. Station is an Instance of Unism, Motion, of Duism, and their Composity, of Trinism. We have here, therefore, modified merely, as in many other cases, The Inexpugnability of Prime Elements (t. 226). But, again, it is the Immobility of The Single Point (Entity, Anything, Something), Perdurivg, which thus furnishes the Most Fundamental Conception of Movement, as the Flux of Time-so describing, or converting into Line; while, on the contrary, The Line,-in its own nature the Type of Track, Pathway, Procedure, and so of Movement or Motion,-if it be sustained by the Points at its two Ends, and viewed objectively by an
observer stationed away from the Line,-becomes, as a Level, Base-Line, or Foundation, the Type of Deadness and Immobility, (proper characteristics of Point and Position) ; of the Fixedness of Law, and hence, of the Most Fundamental Conception of Station or Rest. Herein, then, there is Terminal Conversion into Opposites (t. 83), and even Convertible Identity (t. 89). So it is that these several Fundamental Formulæ of Universology are illustrated at the very origin of Things.
561. The Point at which Time and Space, (a Point in Time, and a Point in Space), meet and concur is, finally, the True Instant, The Occasion, The Conjuncture, The Happening, The Event. It is the Copulation of the Static and the Motic Principles of Being; the Becoming; the Whole in an Absolute Sense of what is. The Principle of this Vivid Instant, which, repeated to Infinity, is the totality of Space, of Time, and of Being, I shall refer to as Ivstanciality. It is the Third term of the Series of which Time and Space are the Primary and the Secondary Degrees. Time and Space are here mentioned in this order, because, in the Natural Order, Time is Unismal or First, Space Duismal or Second, and Instanciality Third. It is only in the Logical Order, more cognate, it is true, with Science, that Space is Unismal, Basic, or First, and Time Duismal, Secondary, and Derived.
562. Assembling now the several Sets of Cosmical Analogues hitherto paraded in this connection, I place them for reference in the following Table under the Heads of Unismal and Duismal, respectively, according as in their Natural Order they belong :

$$
\text { TABLE } 40
$$

Unismal.
Existence (Existere)
Tine
Motion
Substantivity (Reality)

## Duismal.

Beng (Esse).
Space.
Station.
Adjectivity (Phenomenality).
563. Existence-Relative Phenomenal Being-is Logically Subsequent to, or conceived of as Derived from, Being properly so called, which last is the Entical or Absolutoid Substrate which upholds the Phenomena, and upon which the Limitation of Relativity is imposed ; but for that very reason it is in The Natural Order, prior: that is to say, we Observe Existence in the first Instance, and Infer Being from $i t$, by Abstraction, which is a Dualizing Process. In the same manner, Space is Logically prior to Time, but in Experience it is different; so of Station and Motion; so, in fine, of Substantivity, (the Real Objects of Being), and Adjectivity, (the Attributes and Properties of Objects). This Last Discrimination, (Substantivity and Adjectivity), repeats the First, (Esse and Existere), only in greater Exteriority and Development, in the Elaborismus,-in fine, instead of the Elementismus of the Universe.
564. The Numeral Analogue of Crude or Chaotic Nature and of Chaotic Form is Irregular Number, Numbers taken at Random, unreduced to the Order of Count or Calculation ; as 5, 63, 102, etc. ; that of Science and Regular Form is Orderly Number ; and that of Art is that largeness in the view of Number which finds a place in the Constitution of things, subordinate though it be, for the Irregularity or Chance-governed Arrangement of Numbers, as in the casting of Lots, along with the properly adjusted regularity of ordinary Count and Calculation.
565. For Nature re-appearing within Science, the Morphic Analogue of which is Roundness, ( $\mathbf{t} .516$ ), the Numeral Analogue is Round Numbers, so called, from an instinctive perception of the Analogy, that is to say, Summation Proximately correct, rounded or "lumped," as when we guess at a number, and do not care to take the trouble of an actual Count or Calculation. Round Numbers are intermediate in their grade of Organic Summation between Indeterminate Number-One, Mary, All, (t. 333), and Exact Number.

Exact Number, that is to say, Number rectified (Lat. Rectus, straight), or Straightened out, is then the Analogue of SciENCE in the Strictness of the term, which is Exact Science; and with Straight or Exactified Form (t. 516). The Blending of Exact (Counted or Calculated) Number, with the Free Estimates of Proximate Reckoning, as happens in the Operations of Trade, is then the Numerical Analogue of Art, and of Modulated Form in the Domain of Form.
566. Estimative or Mentoid Round Number is not the only Variety, but is a Leading and Important Variety merely of Round Number-Analogous with Nature. It subdivides into Three Branches, as follows: 1. Maxman, or Gross Number or Numbers ; 2. Minmal, or Net Number or Numbers; and, 3. Average, or Mean Estimative Round Number, midway between the other two Varieties. These have for their Analogues in the Domain of Form, 1. Maxmal Estimative or Mentoid Round Form, (A Mental Conception of Nature), as the Gross Round Form, as of the Earth, illustrated by an Imaginary Circular Line, (or Curved Plane), touching the Highest Points of the Irregular Surface, the Tops of the Mountains merely, and so including the whole Earth; Minimal Estimative or Mentoid Round Form, (Conceptive), the Net Least Round Form, as of the Earth, illustrated by an Imaginary Circle coinciding with the Deepest Depressions, as the Lowest Beds of the Oceans and Seas; 3. Intermediate or Average Estimative Round Form, (also often and Readily Squaredby Tendency to Equation)-see the Cross in the following Diagram (t. 567). This coincides with the Mean Distance between the two previously described Circles, and with the Water-Level or Surface of the Oceans and Seas. Estimative or Mentoid Round Number and Round Form of this kind are the Numeral and Morphic Analogues, respectively, of Geveralization, and so of Generalogy or Natural Philosophy (t. 337), in the Distribution of the Sciences. Maximism or Extreme Outness generalized, or mentallv esti-
mated, coincides with the Objective Method; Minimism, or Extreme Inness, with the Subjective Method ; and Average, or Mean Intervention, with "the Subjective Synthesis," or Generalized Logic of Generalogy (t. 443).
567. The Generalized Outness, Inness, and Mean Position of Unismal Extension, coinciding again with the Ideas of Greatness, Smallness, and Equated Size, universally, are represented in the Elementismus of Speech by the Three socalled Nasal- or Nose-Sounds $M, N$, and $N g$, respectively. The Nasalization or Metallic Ring of these Sounds produced in the Nose or Head denotes their Generalizing, Mentoid, or Mind-related character, and distinguishes them from all other Sounds. It is not anticipated that this statement will be appreciated at this point, but it is convenient to make it in this connection for future reference, when treating of the Elements of Speech. Some other Alphabetic Signs will be introduced in the present chapter, and gradually substituted for the Figured Notation. The use made of them will be partially understood by Students of Phonetics. In the "Structural Outline" especially, a beginning is made towards the explanation of the Analogues of these Elements of Speech ; the full exposition of the subject must await the appearance of a Subsequent work-The Introduction to Alwato, the New Scientific Universal Language (1). The ordinary reader may, for the present, receive the Alphabetic Letters and Combinations introduced here, as if they were merely Arbitrary Signs of the Kinds of Form to which they are attached. The real idea at the bottom of this subject, namely : That each Elementary Sound is inherently laden with a meaning of its own, is too difficult and important for an incidental presentation. The following

[^73]Diagram will sufficiently illustrate the three Varieties of Form now under consideration :

568. The general features of the preceding diagram will be sufficiently understood from the .explanations already made. The appearance of the Cross within the Diagram requires, however, additional explanation. Of three concentric circles, equidistant, the middle one denotes, even in its Actual Curvation, a Species of Equation or Equalization-the Average, in other words-between the other two. But average (Lat. ad, то, and verum, the Truth) has relation to Truth; and Truth has a radical relation to Straightness (t. 516, 521). So, also, if we excerpt the Least Element of any circle, it (this least Element) will be, in Pure Theory, a Straight Line ; for it is not an Absolutely Least Element, unless it is the mere distance betwoen a given Point in the Line and the next Point to it in the Continuity of the Line; and the Ideal Line between any two Given Points, with no intervening Point or Points of Divergence between them, is, necessarily, a Straight

Line, quod erat demonstrandum. This Least Element of Straight Line is then at right Angles to a Radius of the Circle, and when Equated or Extended, tangentially, on either side, and the conception enlarged, the resulting figure is the Cross, as the more Radical, Elementary, and Exact Symbol of Equation, Science, and Truth. This then is the TransitionPoint from Generalogy to Specialogy, and as pivoted between them is the Figure which is most especially typical of the Entirety of these two Domains of Science. The Exactological Department of Generalogy, Comte's Subjective Synthesis, (t. 443), is his nearest approach to Speciality in Science.
569. As the Square is an especial Analogue of Exact Science, so the Cross, wholly equated, that is to say, with the same length of arms in either direction, as in the following Diagram,

is also an Abstracted Emblem of the same Principle of Exactitude ; whereas the Cross introduced in the preceding Diagram (No. 18) is a compromise between this extreme exactitude of Specialogy, and the broad, generalizing freedom of Natural Philosophy. The proportions resulting under those conditions, from Tendency to Equation (t. 535) somewhat modified artistically (t. 515) or practically, are precisely those of the Standard Ecclesiastical figure of the Cross. It will be shown elsewhere that Science or Pure Reason is the

Cross upon which the Fleshly Man, or the Body of the Affections, has to be crucified.
570. Returning to the Plus-, Minus-, and Equation-Aspects of the subject, these Three Branches of Form, $\pm=$, will also be reduced and represented by the following more Elementary Linear Illustrations of the same Morphic Principles, to which are attached the Numerical and Alphabetic Signs, respectively, which are appropriate to them.


5\%1. The preceding paragraphs dispose of the Static Aspect of Generalogy, $\pm(1.2)$, (t. 441). The Motic Aspect, $\pm$ $\left(1^{\text {st }} \cdot 2^{\text {nd }}\right),(l b$.$) means Generalized Movement, and subdivides,$ by + , and -, to denote Rates of Velocity. The Letter-sounds corresponding are the two Remaining Liquids, $R$ for the Plusquantum of Velocity (Rapidity), and $L$ for the Minus-quantum, (namely, Lentitude or Slowness). The Roundness of Movement thence resulting is Rotation or Revolution. If an object be impelled to Rapidity of Movement in one part, at the same instant that it is hindered or detained in another part, it can only rotate. Rotation is a Composity, therefore, of the Motoidism and the Statoidism of Motion; for Rapidity is allied to, or repeats, or is like, Motion ; while Slowness is allied to, (tends towards), or repeats, or is like, Station or Rest. The Plus-quantum of Motion is then Rapid Rotation, and the Minus-quantum is Slow Rotation. The Rotation is signified, in the Domain of Form, by a Ring-like Roundness of Figure, the greater Closeness, Kinkiness, Crankiness, or Steepness of the Curvation denoting Rapidity, and its greater Relaxation denoting Slowness. Together they modulate each other, and produce a Spiral Folding-in, or else Unfolding, (Development), according to the Drift of Direction. Movement of all Kinds is identified with Art, and so a Variety of the Serpentine re-ap-
pears here. The following Diagram exhibits this Type of Form, and adds the corresponding Numerical and Alphabetic Notation :


The + sign in the Order $\mathbf{1 s t}^{\text {st }} \mathbf{2}^{\text {nd, }}$, also represented by the Sound $R$, denotes Rapidity; the Sign, or $L$, Slozoness: and the $=$, or $R l$, the Mean Velocity. The two Drifts of Direction are indicated by the Arrows. The Unfolding of the Coil corresponds with Retardation; the Folding in of it, in the Counter-direction, with Acceleration.
572. We have now cleared the ground sufficiently-for in addition to what was announced above ( t 509 ) we have discussed Generalogical Form-to be prepared to expand, and to exhibit the Morphic Analogues of the Spencerian Distribution of the Sciences ( $\mathbf{t}$. 507): 1. The Abstract-Concrete; 2. The Abstract ; and, 3. The Concrete.
573. In Scientific Research, which prefers the Logical to the Natural Order, it is the Abstract, the Middle one of these Three Divisions, which is leading or dominant. This is, therefore, the Position in Echosophy of the Spencerian Abstract. It is then the Peculiarity of the Abstract here meant ; (the Abstractismus of Echosophy) ; that it is symbolized naturally and appropriately by Figure (or Figures) entirely composed of Ligirt or Thin Lines. These represent the Tenuity and Sharpness, the proximate and theoretical Nothingness, of Pure Abstraction, as contrasted with Concreteness, of which, therefore, the Natural Morphic Analogue is Figure (or Figures) composed of Heavy or Thick Lines (or Points and Lines). "The Concrete" is Tire Corporeal, or the full Incorporation or Embediment of
the Substancive Element of the Abstract-Concrete with the Pure Form-Element of the Abstract. It is, therefore, properly The Compound, or The Composite. This is again Bodr, properly so called. The Common Body of Nature is the World in its Orderly presentation of Use and Beauty,-the Completeness of the incorporation of the Underlying Constituent two Principles, the Abstract and the Concrete, or Substance and Form. Hence Cosmos (Greek), means both The World, and Beauty, or a Thing of Beauty (whence English Cosmetic, a beautifier) ; and so the Latin Munditia, neativess, tastefuliness, from Mundus, World. Compare also, for incidental coincidence of sound, the Alwato word Bo (Body) with the French Beau (Fine, Handsone; pronounced bo).
574. Observe, therefore, that the Symbolism of merely Thick Lines (and Points) is not with the Concrete (or the Composite), but with what Spencer denominates the Abstract-Concrete. By this term he should be held to mean Concreteness wholly separated or Abstracted from all connection with the Abstract, or, as we may now say, with Lines uniformly Thick or Heavy, that is to say, not in any part of them tapering out into Lightness or Thinness. Such a Concreteness is then a variety of Abstractness, (or separateness from something else); and as it is The Variety which Nature presents, (there being no proper Abstract in her), it is what I have called NaturoAbstract; while Spencer's Abstract is my Sciento-Abstract ( $t$. 270). The advantage of these latter terms is that we are brought by them into analogical relations with the primary division of Being into Nature, Science, and Art, respectively. (t. 11).
575. The Remaining Division of Form, the Composite, (t.573), is then Arto-Abstract, viewed with reference to the distinctiveness of its Elements, and their Graceful Interblending; or, simply, The Concrete, viewed with reference to their Confusion, or Growing together, (Lat. con, With, and crescere, то
[Read from below upwards.]
Diagram No. 22.
3.

Conorete Form.
(Arto-Abstract). Analogue of Concretology, (Tab. 15, t. 278), and of the Elaborate or Ornate Cosmical Conception. (Tab. 21, t. 358.)

2.

Abstract Form.
(Sciento-Abstract). Analogue of Abstractology, (Tab. 15, t. 278); and of the Dialectical Cosmical Conception. (Tab. 21, t. 358.)

1.

Abstract - Concrete Form,
(Naturo-Abstract). Analogue of Abstract-ConCRETOLOGY, (Tab. 15, t. 278); and of the Instinctual Cosmical Conception. (Tab. 21, t. 358.)


Grow, whence Concrete), into Unity with each other. The Analogue of this Variety of Form is then, consequently, Lines, or Figure (or Figures) composed of Lines, which taper or gradually attenuate from Heaviness or Thickness to Lightness or Thinness. Thick or Heavy Lines correspond with, are the Analogues of, or esho to, Shade or Shadow, and hence, to Darkness and Night. Thin or Light Lines have the same relation to Light and Brilliancy or Clearness generally, and hence to Daylight and Day. These Analogues coincide with the difference between Concreteness, (ior Shade), and Abstractness, (for Light), and will grow into constantly increasing clearness and importance with the further development of the Science of Analogic. c. 1. The Diagram on the preceding page exhibits very strikingly these most basic and important Discriminations of Form.
576. If now Abstract Form be first classified,-for it is this Tariety which is the Dominant of the Domain (t. 523), -its Tirst Grand Subdivision is into 1. Intricated or Logical Form (2.)1; 2. Clear or Distinct Form, or Analogical Form (2.) 2; and, 3. Calculated or Mathematical Form (3.) 3 ; in other words, Catalogical, Analogicat, and Maikematical Form, respectively (Tab. 15, t. 278).

[^74]577. Intricated Form properly includes, however, several, and especially two, Grand Varieties, only one of which is Logical (Catalogical). These two Varieties are: 1. Ivterlocked or Concatenated Form, the Analogue of Logic; and, 2. Overlapping or Imbricated Form, the Analogues of which will be noted elsewhere.
578. The Type of Concatenated Form is the Chain (Lat. Catena, a Crians), with the Links interlocked; or the one including or holding the other. More primitive and truly typical, however, is the Nest of Concentric Circles or Spheres, one containing the other, as in the Diagram below :

Diagram No. 23.


It is obvious here that, if $A$ is in $B$, and if $B$ is in $C$, then, (and therefore), $A$ is in $C$. This is the total signifi-
4. The Analogy and Close Relationship between Lightness in respect to Weight, and the tendency to Float or Swim upwards and assume High Position, -and hence High Position itself, and Objects in High Position, as the Human Head and Face-and so to represent Levity or Lightness and Clearness, and hence The Abstract, are expressed in the Formula:

## Supernatation of Levities;

And the Counter-Analogy and Relationship between Heaviness in respect to Weight and the tendency to Sink or Subside into Low and Dark Positions, and hence Low and Obscure Position itself, and Objects so situated, as the Posterior of the Body,-and so to represent Darkness and Retiracy, and hence The Concrete, (as the thick-tangled Growing-together of the jungle), are expressed in the Formula :
cance and the Perfect Type of the Syllogism, which is in turn the Crowning Sphere, and, in a sense, the Whole of Logic.
579. Although the Three Concentric Circles are the most explicit type of the Syllogism, and so of Logic, yet implicitly, or in respect to the Lowest Analysis of the Principles involved, Logic (Catalogic), is equally well symbolized by the Single Radius, with its Beginning (at the Centre), its Shaft-like Continuance (or Sequence), and its End or Conclusion (at the Circumference). We have in it Premise (Lat. Primus, First), Sequence (Lat. sequor, to follow), and Conclusion (Lat. con, wITH, and cludo, то sHet). See c. 1-9, 321; 000. Applied Logic is also denoted at the other extreme by Concentric Spheres (Onion-like) in the place of Circles.
580. But in strictness, and when we pass to details, it will appear that the Radius is the Analogue of that Elementary Entity in Logic called a Tervs, literally an End, or that which sticks out or exists, individually, as the single spoke of a wheel. Radius means literally a spoke. The Periphery, or the Base-Line at right Angles to the Radius (or Perpendicular), is, par excellence, The Linit and the Analogue of Definition, (de, of, and finis, End or Limit). Terms and Defintitions constitute the Elementismus of (Cata)logic, as Propositions and Syllogisms do the Elaborismus ; hence it is that the three Parts of the Single Radius, Beginning or Inmost (in the Natural Order), Middle, and Exterior or Terminus (whence Terns), repeat, or echo more elementarily, to the Three Propositions of the Syllogism. But, by Terminal Conversion into Opposites (t. 83), as between Elementismus and Elaborismus, (or the Antithetical Reflexion of the Two, t. 381), the Order is reversed in the latter case, or, in other words, the Logical Order predominates, and the First or Major Proposition echoes to the Outer and most Inclusive Circle in the Diagram above; the Second or Minor Proposition to the Intermediate Circle ; and the Third Proposition or Con-
clusion, to the Inmost or Central Circle or Mere Point. There is in this Going-forth on the Single Radius, through successive stages, and the subsequent return, more elaborately, through the successive Converging Circles and Spheres, to the Centre as Conclusion, or Teleological aim, a complete image of both Swedenborg's and Hegel's Conception of the Order of Creation, or of the Evolution of Universal Being-from God, or the Absolute Mind, out into Creation ; and thence, back, by successive Spheral Elevations, to the Point of Departure ; as God now become Man; or incarnated ; and arrived at the Acme of Perfection. The Evolution is the same again as that of the Individual Consciousness which is first projected outwards spontaneously or irreflectively into the Actualities of Being ; and only afterwards reverts, abstracts itself, as it were, from surrounding Nature and Phenomena, even the Plienomena of its own Being, and comes into the Knowledge of itself; and so, from being Conciousness merely, it becomes Self-Consciousness.
581. In accordance, and by Analogy, with these Doctrines, God, in the Relative, or actually, is himself a Being of Experience and Development, only heretofore and now striving and tending to arrive at the Realization and Self-conscious possession-incarnate in man-of that power and perfection which we have ideally attributed to him, and which He may rightly be said to possess in the Absolute. According to this doctrine, again, Prayer, in the Infantoid Development of man, is the Inward Aspiration and Striving of the Divine Principle within us after the Vague Ideal Perfection of a Completed Manhood, and after what is then the same thing-complete Identification or Unity with God ; who is, by this Theory, to come to his own Absolute Self-Consciousness primarily in us ; pre-eminently in a perfected and Divinized Universal Human Society ; and Supremely in the Central and Governing Individuality of such Society, or Millennial World.
582. Logical Terms are, with a difference, the same as

Grammatical Words. The meaning of the Fact, that the Radius, Analogue of the Term, has three Aspects or Stages of Development: 1. Outer or Ultimate ; 2. Middle, (Spiritual, corresponding with the Breathing-Place or Chest, as midway between the Extremities of the Body) ; and, 3. Inmost, is, that all Words or Terms, whatsoever, have, by the inherent Constitution of Things, three Meanings or Varieties of Correspondential Meaning, folded, as it were, into each other, and revealed one after the other, in succession, to the Unfolding Faculty of Man. The Natural Meaning which the child attaches to a word, which conveys to him a mere Fact, is lifted to a new Rational-Spiritual Plane in the developed Intellect, which sees in the Fact not this Fact merely, but an Embodiment or Typical Representation of a Principle or Truth ; and to a still other and Celestial Plane in the Mind of one who sees in the Truth a Means of Divine Uses for the blessing of Mankind, and who loves it for that sake. Swedenborg laid hold, intuitionally, of this occult Principle in the Constitution of Language ; but being predominantly theological, and only subordinately philosophical, he restrained its application to the Reading of the Scriptures, which he called The Word, as if it were a Special and Divine Property residing in them, instead of being, as it is, a Truth of profound Scientific Significance and unirersal application. The result of this narrowness in the perception of the seer has been that his followers have made of "The Word" the same Sacramental Thing, the same object of a Semi-Idolatrous Worship, and the same hindrance tu Progress which other religions and sects have made of their Church, their Pictures and Images, their literal Bible, their Sundays and Holy Days, and of other legitimate means, in a rational degree, of Grace in the Soul, and Development in the Mind and Life.
583. Inasmuch, indeed, as the general scope of the semiilluminated vision of Swedenborg was limited to the First of Three Grand Stages of Cosmico-Spiritual Evolution (t. 428);
and, inasmuch as, consequently, what he saw in Trigrade Scale, was merely Subdivisional of that Third of the whole Career, -it results that the Whole Number of Meanings more and more interior, which attach to every single Term or Word, should be susceptible of being carried up to Nine instead of Three ; and, by the bi-furcation of the Third or Last, the Artistic Grand Division ; then up to Twelve, plus the Universal as Pivot, making in all Thirteen. This, at least, is the Standard Measured Series; the Absolute Series, here as in every thing, is Infinite. The Total Procedure outward along the Radius symbolizes the First Grand Division ; the Return Career, through Concentric Spheres, to the Centre, symbolizes the Second; and the Reprojection from the Centre of achieved Self-Consciousness, (t. 580), which bi-furcates as Predominantly Progressive, and Subdominantly Regressive and Collateral, symbolizes the Third Grand Division of the Total Evolution. These accord again with the Three Orders or Methods in Science: 1. Anticipatory or Pseudo-Deduction ; 2. Induction ; 3. Reprojection, True Deduction or Coystruction (c. 1-9, t. 321). Even this does not compass the possibilities in this direction; for all the three Methods here mentioned, and subdivided by Three, are Catalogical. There remains Analogic and Pantologic, suggesting Thirty-Six and Forty-Eight as Limiting Numbers on Higher Measured Series still. Such subtleties and glimpses of the almost endless derelopment, which Future Critical Science may take on, are bewildering, and need not be insisted on here.
584. Clear or Distinct Form is the Analogue of Analogic. This may be represented typically by two Equal Circles or Spheres disengaged or separated firom each other, not concentric, but side-by-side of, or compared with, each other. Still more primitively the Two Hemispheres of the single circle cut by a Diameter ; and thence even, as the cause of this Dialectical Equation of the Halves, the Mere Diametrit or Measured and Equally divided Straight Line itself, is The

Type and Symbol of Analogic. The following Diagram makes the necessary exhibit:

$$
\text { Diagram No. } \mathscr{2} 4
$$

Fig. 1.


Fig. 2.


Fig. 3.
585. Still more radically, Analogic is symbolized by the Simple Straight Line, as the Chord of an arc of a circle; that is to say, as a Level or Base-Line, Horizontal as contra-distinguished from a Radial Line, which is Perpendicular or Lengthwise in position (c. 1-9, t. 321). A Diametrit is simply the Chord of the Largest Arc of a circle $\left(180^{\circ}\right)$. In short, therefore, Perpendiculism, or Lengitiwiseness, related to On-going, and hence, to Co-sequences, (t. 321), denotes Logic ; and Horizontalism, or Sideifiseness, related to Expansion, and hence to Co-existences, (c. 1-9, t. 321), denotes Analogic. Perpendiculism and Horizontalism are here taken, as shown by the associated terms, in an enlarged sense ; A Radius, as Perpendicular to a Centre-Point as its basis, and any Base-Line as Horizontal, even when standing perpendicularly related to other Objects or Lines. A Radius is the Type of this Enlarged Aspect of Perpendiculism, and a Diameter or Diametrit is the Type of the corresponding conception of Horizontalism. The Chords of Arcs, which should connect any two juxtapositional Radii at the same distance outword from the Centre, in Dia. No. 4,
t. 188; c.1-9, t. 321) ; or, what is the same thing, the Side-Lines of any, Polygon, are in this sense Horizontal Lines. They correspond with Breadthwise Extension, and so with Space, and are, as a distinct Family in Morphology, to be distinguished from Radiating, Protensive, or Forthstretching and Time-like Lines. As "Horizontal" and "Perpendicular" have more limited meanings, these two Radical Varieties of Lineation will be better distinguished, the true Analogy once established, as Analogical or Analogicoid, and Logical or Logicoid Lines, or Classes, or Families of Lines-Analogicoid for Horizontal, and Logicoid for Radial. Combined and intricated with each other they constitute a third variety of Form, an instance of which is seen in the Spider's web, then Analogous with Mathematics, and hence, denominated Mathematical or Mathematicoid Form. The Diagram exhibits these Three Varieties first reduced, by analysis, to their proximately Simplest Expression ; and then to their Simplest Symbols in the Single Lines, (the Sub-figures of the Diagram), which indicate their respective Principles.

## Diagram No. 25.

Figure 1.


Sub-Figure 1.

Figure 2.


Sub-Figure 2.

Figure 3.


Sub-Figure 3.

586. An intimation has been made in what precedes that the same Form-Analogue reappears in Varying Degrees of Sim-
plicity and Complexity, a fact already somewhat illustrated, in the Diagram, by the difference between the Lines marked Sub-figures and the Figures ; but this Subject, -the existence in the Constitution of all things of an Ascending and Descending Scale of Relative Simplicity and Complexity,-is so important that it demands to be more formally stated, and more fully expounded. As the last word upon the Subject, all Differentiation whatsoever resolves itself into the kinds of Variety which are susceptible of being measured by this Scale; but, nevertheless, there is a Special Kind of Variety which is more directly and obviously to be referred to a MERE difference as between a simple and its Compounds. It is clear, for example, that a Cube is only a higher power of the Square ; a higher Degree of Complexity, in other words, in a definite proportion, of the Same Principle of Squareness.
587. This kind of Variety in the Constitution of Things appears in connection with the subject now under consideration. Logic, Analogic, and Mathematics occur in Different, Distinct Degrees of Development, without ceasing to be Logic, Analogic, and Mathematics, respectively. We have seen, (t. 579), that the Logical Premise, Sequence, and Conclusion may all be illustrated by the Beginning, Middle, and End of the Single Radius of a Circle. We have seen also, however, (t. 578), that the Major and Minor Premise and Conclusion are more explicitly illustrated by the Three Concentric Circles, the outer inclosing and containing those within. So, again, now, in respect to Analogic. The Single Horizontal Straight Line is the most Radical or the Simplest Analogue of this Middle Department of Abstractology. Let us assume that this Line is the Diameter of a given Circle, and indicate it numerically, as, say, 12 (inches, feet, or other units of Length). This will define it to a given Length. If now we erect a Square upon this Line as a Base, we have the Second Power, both in Number and in Form of the given Line ; that is to say, 144, (12 $\times 12$ ), in Number, and an Actual Square, in Form, each
of the four sides equal to the Base Line. The next Power will be 1728 , $(12 \times 12 \times 12)$, in Number, and an Actual Cube, in Form, of Corresponding Dimensions. The Line, and with it the Point, are then Elementary; the Surface and the Solidity are, on the contrary, Elaborate.
588. The Given Straight Line or Base,-properly the First Power, though seldom or never so denominated,-the Square, the Second Power, and the Cube, the Third Power, are, then, the First, Second, and Third, Degrees, in The Scale of Relative Sinplicity and Conplexity, in respect to the Aspect under which they are investigated. Observe, in the first place, that this precise parallelism in the respective involution of Form and Number, such that the very same terms (Square and Cube) apply indiscriminately to either, is the most decisive and best illustrative case of Analogy between these two fundamental Sciences anywhere to be found; unless, indeed, we should assign that rank to that more Universal Echo of Number to Form which is the Basis of Modern Analytical Geometiy-(Descartes). Observe, in the next place, that, applied with the same rigor of Analogy to Analogic itself, as the Department of Being upon which we are now converging the rays of our inquiry, the Scale of ascending Simplicity and Complexity is equally discernible and important. The Given Straight Line is the Analogue of the Analogic of Laws and Principles. This is Analytical, Radical, and Elenentary Analogic. The Square is the Analogue of Analogic as ex-plain-ed by reference to Specific Phenomena which are coincident with or correlated to each other, The Analogic of Phenomena. The Cube is then the Analogue of Analogic as not merely ex-plain-ed in words describing Phenomena, but as illustrated as well by actual Objects in which the given Principles are embodied, or which are characterized by the given Phenomena. This is The Analogic of Concrete Reality. It goes over to, and is, in a sense, a part of, Concretology. The following Diagram, extracted from Dia No. 10,
(t. 512), illustrates this most central and inportant portion of Morphology, and its accompanying Analogic (t. 277) :

$$
\text { Diagram No. } 26
$$

Figure 1.


Figure 2.
Analogic of Phenomena.

Figure 3.
Analogic of (Pure) Concrete Reality.

589. The Straight Base Line (Fig. 1.) is the proper and abiding Analogue of Law or Lay, the foundation, as it were, upon which all above it is erected. The Ends of this Line, at the corner-stones, as it were, of an Edifice, from which the Line itself is derived, directly and inversely, are the Analogues of Principles, (Prima Capita), strictly so regarded and discriminated from Laws. But usually Laws and Principles are spoken of collectively, and frequently also confounded with each other; a species of confusion for which it is not essential at present to propound a remedy. c. I.
590. The Fundamental Laws (or Principles) of Analogic of which the Elementary branch of the Science consists, as the very basis of Universology itself, are Unism, Duism, and Trinism. These are related to the Cardinal Head-Numbers

Commentary, t. 589. 1. The intrinsic difference between Princtples and Latws (Ponnts and Lines, in this Aspect), coincides with the difference between Premise and Sequence (Centre-point-beginning and Linear Protension of the Radius) in Catalogic (t. 579) ; a difference which does not here come prominently forward as it does in that case; the Line itself being here taken as the Base, whereas in the other case, it was the (Centre-)Point. The Discrimination is not, therefore, here essential.

One, Two, and Three, and to Extension in Space, and hence, to Horizontalism ; as Premises, Sequences, and Conclusions in Catalogic are related to the Ordinal Head-Numbers Firss, Second, and Third, and to Protension in Time, and, hence, to Perpendiculism). (The Latin for First is Primus, Secundus, Second, is cognate with sequor, whence Sequence.
591. The first office of a given Straight Line viewed as a Base Line, Threshold, or Limit, is to unite the two Points between which it extends. This Function is Unismal. Its second office is to cut, sunder, or divide the two Portions of Space which lie upon its opposite sides, and of which it is the Limit. This Function is Duismal. Its third and compound office is to perform this Uniting and Dividing at one and the same time, and in a composity of the relationship of each function with the other, (in a Cardinated or Hinge-wise manner), and this office is Trinismal.
592. Still more radically, if we confine the point of our critical attention to the Sidewise function of this Line merely, it alone unites as well as divides the two portions of Space which lie upon the two Sides of it, (or, in other words, these two portions of Space unite at the Line by which they are also divided), and hence it both unites and divides these portions of Space in a Hinge-like or Cardinated function, a Species of Balanced Vibration between them. Unism, Duism, and Trivism are all, therefore, illustrated in this one Aspect of the Horizontal Line or Limit,-that Aspect which is most characteristic of this variety of Line.
593. In the Fundanfental Exposition of the Classificatio:i of the Sciences, (Tab. 15, t. 278), Analogic undergoes no Distribution. Logic is divided into Premises, Sequences, and Conclusions, (the first of these into Major and Minor Premises). It is now obvious that this Distribution lies farther back than the one we have just instituted above between the different kinds of Analogic (t. 583), inasmuch as it relates to the difference between Point and Line, while this latter distri-
bution relates to the difference between Lines, Squares, and Cubes (as Geometrical Solids).
594. It is now to be observed that within Logic (Catalogic) there is, subsequently, an echo to this Subdivision of Analogic, as follows: Logic, as symbolized by the Single Radial Line, is the Recondite, Non-Explicated, Logic which actually underlies all Reasoning, although the Reasoner may have no knowledge of it. In this case the Major Premise shrinks to an implied Postulate, a Point tacitly assumed as granted. This kind of obscure Logic is the Analogue of The Analogic of Laws and Principles (Fig. 1, Dia. 10, Dept. of Science). Secondly, there is Logic formally Explicated. The mere Point (Previously assumed) is now expanded into an Outer Circle typical of a distinct Major Premise, and which on inspection is found to include a Minor and then a Least Circle within it, the latter as the included Conclusion. The Outer Circle alone may practically be taken, and made to serve diagrammatically as the Ordinary Analogue of this Variety of Logic, and as the Analogue, at the same time, of the Square, in the preceding Diagram. Finally, the Circle thickened to a Pure Sphere (that is to say, still Abstract, or Figured in Pure Space with no Material or Real Content), is then the Analogue, in Logic, of the Pure Cube in Analogic, and denotes Logic applied in the Actual Construction of an Argument. An Argument, or Syllogism, is composed of Three Propositions,-The Major, the Minor, and the Conclusive. This is the Major Kind of Trigrade Scale. But the Single Proposition is also composed of Three Parts,-The Subject, the Copula, and the Predicate. This is analogous with the Trigrade Scale perceived in Universal Logic by Swedenborg, Comte, and others, and which is only a Subdivisional Distribution of One Third of the True Argument. They do not, therefore, arise "to the Height of this Great Argument."-(Milton). Every thing, completely organized, even the Universe itself, is, by Analogy, an Argument, as the genius of the poet has devined. The follow-
ing Diagram exhibits these Subdivisions of Logic. Compare with Dia. No. 23, t. 578.

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Diagram No. 27.
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Figure 1.
Implied Logic. (Elementary).

Beginning (Premise).

.Middle (Sequence).

End (Conclusion).

Figure 2.
Explicated Logic. (Theoretical Elaborate). (Pure Practical Elaborate).

Figure 3.
Pure Applied Logic.


595. We pass now to the third Variety of Abstractology; that which results from Combination of Logic and Analogic. This splits, however, immediately into two: 1. Pantologic ; 2. Mathematics. Pantologic results from the simple Addition of the two Elements, (Logic and Catalogic), and is so simple a product that it is suffered ordinarily to subside into the same Class with the Elements or Factors from which it is derived. Hence it does not appear formally in the Fundamental Exposition (Tab. 15, p. 278). Here, however, in the more Elaborate Exposition of the subject it requires to be illustrated, and arises in fact into the most important Aspect of the whole subject.
596. The Crossing, at Right Angles, of a Radius or Perpendicular by a Horizontal or Base-Line,-the Analogues of Elementary Logic and Analogic, respectively, (t. 415, and Subfigures 1 and 2, in Dia. 25, t. 415), -produces a Basic Cross which is then the Analogue of Elementary Pantologic (t. 269). (See before reference to the Bi-trinacria, a. 10, c. 32, t. 136.) The Mingling or Blending of the Circle and the Square results in the production of an Ovoid Surface, which is the Analogue
of the Theoretical Explication of Pantologic ; (see in relation to the Egg-figure t. 514) ; and the assignment of the Third Dimension, that of Thickness, produces the Pure Solidity of the Eggfigure, which is the Analogue of Pure Applied Pantologic. The following Diagram will, sufficiently for the present, exhibit these new Correspondences. (See also on the Egg-figure t. 773.)

Diagram No. 28.

Figure 1.
Elementary Pantologic.

Figure 2.
Theoretical Pantologic.

597. Mathematical Forv, also, results from a Combination of Logical and Analogical Form ; but here it is a more radical and intimate blending of the Spirit of Logic and the Spirit of Analogic, respectively. It is a Subjective Combination, not an Objective one, or a mere Adding. There is, intervening between Perpendicularity and Horizontality, a third Variety of Posture or Position which partakes of the Spirit of each. This is what we denominate Inclination. In Fig. 1, Dia. 28, above, there is interposed between two of the Arms of the Basic Cross a mere trace of an Inclined Line, to serve as a transition to the subject next to be treated of. It is then Inclined Form in all its Varieties which is the Type of Mathematics. The Inclined Line embraces in Principle, and thoroughly commingles, Horizontality and Perpendicularity, in a Compromise or Blended Mikton with each other. It is this, therefore, which I have designated, and shall continue to designate, as Mathematical Form.
598. A mere Inclined Line is then the Analogue of Elementary Mathematics ; thus :

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Diagram No. 29.
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The Counter-Inclined Line is again a summary representation of Elementary Pantologic, and the two combined make the Form known as St. Andrew's Cross, as below :

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Diagram No.30.
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599. Correspondentially with the Exhibits made in Diagrams No. 27 and 28 (t. 594, 596), the Three Ascending Degrees of Complexity in Mathematics from Abstract Elements to Explanation and Application, are illustrated in the following Diagram :

Diagram No. 31.
Figure 1.
Figure 2.
Figure 3.
Elementary Mathematics. Theoretical Exposition. Pure Applied Mathematics. (1).

(1). By Pure Applied may be understood the Working of Sums, but not still iu the sense of Applied Mathematics Properly so called, or Coacretely considered.
600. We are now prepared to consider a new and important Discrimination of Form, one at all events hitherto omitted, one which, as it relates to the Mathematics, may best be derired from the Analysis of the Triangle here exhibited, (Fig. 2), but which laps back upon, and applies equally to, Every Variety of Figure whatsoerer. The Discrimination in question is that which corresponds with the First Grand Distribution of the Mathematical Domain, as presented in the Fundamental Exposition (Tab. 15, t. 278) ; namely into: 1. Arithinetic; 2. Geonetry; and, 3. Avalysis. With the Phrase "Geometrical Form" we are all already familiar. It signifies Abstract Pure Form, indicated by Abstract Lines or Limits. The corresponding term, Arithmetical Form, is entirely new, and at the first sound of it, perhaps uncouth; yet when pointed out, it will. I think, be at once perceived that Erery Figure which can be drawn in Space, in idea, can also be indicated by Points ; and again, that Point-Form has the same Analogy with Arithmetic, the Points standing for the Units of Number, ( $t .530$ ), which De-line-ated Form holds to Geometry. Finally, Avalysis, the Third Branch of Mathematics, is denoted by Point-Form and Line-Form co-existing, as they always do, within each other; but in the case under consideration, so far analyzed as to exhibit them both in the Composition of the Total Form. This will be denominated Analytismal or Analytoid Form. The following Diagram shows these important differences:

Diagram No. 32 .

Figure 1.


Figure ${ }^{2}$.
Geometrical Form.


Figure 3. Analytoid Form.

601. As this difference laps back, as previously stated, and covers many varieties of Form, it will add to the pertinency of the discrimination to repeat it with respect to those figures above alluded to, (t. 588), in which the Geometrical and the Arithmetical designations are identical; the Square and the Cube especially. This repetition is made in the following Diagram :

$$
\text { Diagram No. } 33 .
$$

Figure 1.
Arithmetical Form.

$\qquad$

Figure 2.
Geometrical Form.

602. The Contents of Figure 1, Figure 2, and Figure 3 of this Diagram correspond then with an Arithmetical or Numerological Aspect, a Geometrical Aspect, and an Analytoid Aspect of the Trigrade Scale of Analogies in Diagram $\mathbb{N} 0.32$, t. 600.
603. Punctate, Punctismal, or Arithmetical Form is such as concerns the Arrangement of mere Points, or Modifications of Points, or of Objects representative of Points, in Space, and in certain relations to each other; as the Stars in Heaven, the Trees in an Orchard, etc. Such Form, it is true, involves and implies an Interposed entire System of Lines, and hence a Scheme or Framework of Ideal Lines, between the Points. Such are what we mean by Relations; as the Relations, in Space, between the Stars ; but, in this case, this Liniismus is ideally interposed mcrely, as also between the Units of Number,
making them into Series and Sums. It is, therefore, Subordinate, or Subdominant, and occult; or is brought to the Attention and Thought only by this especial Analysis. Conversely, in any Actual Liniar Diagram, the Lines have, interposed between them, by a similar necessary implication, a System of Points, occupying all the Angles, and repeating Punctismally the Entire Liniismal Outline. But here, inversely, the PointScheme is Subordinate and Dependent. Arithmetical and Geometrical Form, are both, therefore, both Punctismat, (or Entical), and Liniismal, (or Relational), as revealed by Analysis, the difference being in the Mere Preponderance of the one Element or Factor over the other Element or Factor; and this is the Type of the Constituency of all Things whatsoever. Evtity and Relation constitute conjointly whatever is; the fundamental difference, in the Product, depending on the Predominance of the one or the other Element or Factor over the other, and in the Degree of that Preponderance. The whole difference is, indeed, reducible to mere Difference of Degree. All Things differ, in the last Analysis, only in Degree. Entity and Relation are, themselves, indeed, in this Last Analysis, Convertibly IdenTICAL. (t. 89).
604. Punctate Form has heretofore played only a very Subordinate Rôle in Science, as might be inferred from the fact that it has not been recognized as a distinct variety, nor named even. Still we are not without some examples of its uses. Punctuation in Literature is an immense help to Scientific exactitude. It is a new step, with the Moderns, in advance of the Ancients, to the precise signalization of Thought. It is the Punctismus of the Elementismus of Language, as the Alphabetic Letter-Signs, (especially of the Consonant-sounds), consisting of Characters, Strokes, or Live-like Figures, are the Liniismus of the same. Vowel-Signs vascillate between the two. In most Languages they have been treated as Letters; in a few, however, as mere Points. Diacritical and

Accent Marks affecting the values of the Letters, or representing Vowel-Sounds, as in Hebrew, belong also here ; that is to say, to the Punctismus of Language. In Pitman's Phonography the utmost economy of the Point-Element of Form has been effected, by multiplying it into its Cognate Idea, that of Position ; the same Point, placed in one Position relatively to the Accompanying Consonant-Sign, has one Vowel-Value, and placed in another Position it has a different Vowel-Value, as shown in the Diagram below:

## Diagram No. 34.

|• tah, | tay, |. tea; | dah, | day, |. dee, etc.
605. But it has been reserved for Dr. Edwin Leigh, a distinguished American Phonetician, to discover, outside of the Domain of Language, the true Field for the Application of this Most Primitive, but Least Known and Least Used Department of Form. This Field consists of what may be rightly described as Maps or Pictured Presentations of Statistics, and other similar uses of Number, by employing the Punctismus of Form. He accomplishes, in other words, the representation of Ideas by means of the Units of Form, that is to say, by mere Points, or Modifications of Points, as Quadrats or small Blocks, etc., arranged in Groups, so as to present a picture directly to the eye, of Actual Numbers, and of the Relations of Numbers; as, for example, in the Statistics of Population, Illiteracy, etc. The System exhibits Number, first in respect to its Absolute Magnitude ; then in respect to the relative Magnitude of different Sums ; and, finally, the Geographical Distribution of Numbers, (as of Population), or their Relations to Space, and their Historical Succession, or Relations to Time. The same thing has, it is true, been proximately effected, but far less perfectly, by means of Geometrical Forms of different proportions, and by the Proportional Length of mere Lines. In Dr. Leigh's Punctate Notation,
there is, however, an Actual Picture of the Groups of Units themselves. The following Section of one of these Maps exhibits the Application of the Principle. (1).

Diagram No. 35 .

606. The field which opens for the application of this simple device, (the Greatness of which, like that of the Art of Printing, c. 6, t. 226, is obscured by its very simplicity), is immense, in aid of the labors of Scientific Men, and in respect to Education especially. A single glance at one of these Statistical Maps accomplishes more than months or years
(1) From "Bird's-Exe View of Slivery in Missourl." Entered, according to Act of Congress, in the year 1862, by Edwin Leigh, in the Clerk's Office of the U. S. District Court for the Eastern District of Missouri.
devoted to the same subject in studying Statistical Tables printed in the ordinary way. It both conveys ideas which the sums of Figures do not convey, and makes a more vivid and lasting impression on the mind. As a new instrument of Scientific Research, it promises to be, to a large scope of investigation, what the Atlas is to Geography, or what Algebraic Expressions are to the processes of Mathematical reasoning. It brings together within a glance of the eye facts which need to be compared, and exhibits relations which would otherwise never be thought of. The numbers of Slaves in the several Counties at the given date, their proportions to each other, and their geographical distribution in the State, are strikingly presented in the single view.
607. But though Punctate Form, as such, has hitherto played only a very subordinate part, still, in a certain echo, a Subdivision of Geometrical Form comes prominently forward to represent it. The Distribution of Geometrical Form which furnishes this Subdivision is this: 1. All Form which pirots or is based on a Point, which Point supports or predominates over the Contiguous Lines of the same Figure, I shall denominate Puncto-basic Form, and it is this species of Geometrical Form which repeats and represents Punctate Form. It is immaterial whether the Point-base, which is also an Angle, be really below, above, or at the side, provided this view of its governing value be taken. Such is peculiarly the case in the measurement of Crystals, the Science of which has hence received the name of Goneology (Angle-Science). This Variety or Aspect of Form has Especial Relation to the Mineral Kingdom, as will appear farther on (t. 628). 2. All Form which has relation mainly to Line or Lines, Linea-basic Form; as in the Linear Branchiness of a Tree, for instance ; (the Internodes, as Reeds, Rules, or Measuring Rods) ; is the Prominent Representation of Geometry within this Total Realm of Geometrical Form. It has also a relation of the Vegetable Kingdom (t. 629). 3. Finally, Form which combines the Punctate and

Linear Point of View in a Composity and in proximate Equaïty, is Linea-Punctate or Puncta-Lineate, and has relation to the Animal Kingdom (t. 628). This is the Substitute within Geometry for the true Analytoid Form (t. 600). The following Diagram exhibits these Leading Varieties of Geometrical Form :

$$
\begin{aligned}
\text { Diagram } \mathbf{N o .} 36 . \\
\text { Pinea-basic Form. }
\end{aligned}
$$

These Varieties of Figure, and the Middle one in each instance, will hereafter be employed vicariously for the true Arithmetical, Geometrical, and Analytoidal Types, as follows. They relate to the Prominent Subdivisions of Geometry, as shown in the Headings of the following Diagram. Figure 1 is to be viewed downwards, as if based on its upper Angle.

Diagram No. 37 .
Trigonometrical Form.
Conico-sectional Form.
Pure Geometrical Form.

Figure 1.


Figure 2.


Figure 3.


Supplementary, Figure 4, Geometrical. ( $\perp$ )
608. It remains to give a somewhat more collected View of the Distribution of Form throughout the Abstractismus; Form which is analogous with the Department of Universal Being; that is to say, Ideal Being, and which is covered by the Science of Abstractology. This will be effected by bringing together, in one Exhibit, the Substance of the Several Diagrams which have occurred since we entered upon this branch of the

Subject. The following Diagram is the Résumé in question. Its several parts are little more than repetitions of what has been previously exhibited and explained:

## Mathematical Form.

Diagram No. 38 .






Ababorate FORM.
609. The Interior Distributions of Arithmetic and Geometry by their Analogical Relationships, though very interesting, must still be omitted, as was done before, and we pass to the Subdivisions of Analysis. (t. 281). These are, 1. Algebra; 2. Differential and Integral Calculus; 3. Calculus of Variations. The Analogue of Algebra is the Base-Line of the Pyramidoid Triangle, consisting of the Shaft of the

Line interposed between its Points or Ends, as distinclly exhibited by the Analysis. For these single Points we may substitute in thought Groups of Points differently constituted of minor Groups, but equal in the aggregate ; and for the Single Shaft Line we may substitute Parallel Lines as indicating the Apposition of one Level Line to another. These Varieties of the Symbolism are shown in the following Diagram:

610. The corresponding Analogues of the Differential and of the Integral Calculi are then the Diverging or Inversely Converging Side-Lines of the Pyramidoid Triangle viewed from the Apex as a centre. Compare what is said of the Trunk and Limbs, as analogous to the same (Dia. No. 2, t. 42 ; c. 2, t. 40; t. $47-58$ ). The Apex of the Triangle, or what is in this respect the top of a Line or Pillar, is the Fulcrum of a Lever or Yard-arms; the Horizontal Diameter resting, movably, upon the Head of the Radius. The Compound Figure then resulting is the Analogue of the Calculus of Variations. The following Diagram presents a Collective View of the Analogues of these three Subdivisions of Analysis:

611. If, in fine, to the movement of the Yard-arms or Lever resting on a fulcrum, (Fig. 5 above), a weight or resistance be
opposed, we have arrived at the conditions of True Mechanical Action. Here, therefore, we pass upwards, and arrive again at the Science of Abstract Mechanics, which Comte has rightly ranked, in this riew, as a Superior Branch of Mathematics (c. 1, t. 23.1). For the Science of Mechanics, in this sense, which goes over from the Proper Domain of Existence, to that of Movement, (ior its Subject-Matter), we have to adopt the exceptional Cleí (2) $3^{1 / 2}$, for the purely Mathematical Aspect of the Subject ; or, simply, $3^{1 / 2}$, for either it or the corresponding Concrete Aspects as well. This is like the Natural Semitone which crowns the Trigrade Scale of Full Tones in Music (c. 39, t. 503).
612. We have now exhausted the purely Cosmical Department of Abstractology (2) $1^{\text {st }}$. It remains to glance at the Pneumatological (2) $2^{\text {nd }}$, and the Anthropological, (2) $3^{\text {rd }}$, Domains of the same (t. 282).
613. First is Pneumatological Fory, (2) 2nd All Actual De-lin-eation is interpenetrated, and then extended, by a Ghostly Semi-real or Spirit-like Accompanying De-lin-eation, (or Punctation), as an Emanation which holds to the Act. ual or Real the same relation which the Spirit-World hold; to the Actual External World (a. 4.7-49, t. 204). The Morphic Analogue of this Spirit-Form is the Tracing of Filmy Indistinct Lines and Points, Radiations, Centres of Radiation, etc., as in the Halo with which the Painter instinctively adorns the Head of the Saint. This may be Light and Airy, and so Celestial and Supernal, or Dark and Lowering, and so Infernal ; or of intermediate Splendor, and so Purgatorial. It is not necessary to trace out these distinctions in detail. The Head, it should be observed, however, is identified with this region of Halo, and especially with the Celestioid or Superior Variety of it. The origin, in idea, of this Variety of Form, was shown previously in one of the Commentaries, to be the SemiNatural, and as it were, necessary, Ideal Extension of every Real- or Thought-Line, beyond its own termini, outwards, as a Ghost-Line, to Infinity (a. 47, t. 204).
614. Anthropic Forn, (2) $3^{\text {rd }}$, is then the conjoined and interblended Tout-Ensemble of Cosmical, or Matteroid, and Pneumatological, or Spiritoid, Form, as in the Outline of the Human Body proper plus the Halo or circumambient Radiation of Filmy Form which permeates, while it also helps to constitute "The Sphere" of, the Individual. c. I.
615. Spiritoid and Anthropic Form, (in the superior sense of the latter term), are difficult of Diagrammatic Representation, and can be better imagined than exhibited.
616. The Aspect of Form, ( $\left.\mathbf{1}^{\text {st }} ; \mathbf{2}^{\text {nd }}\right)$, which corresponds repetitively with The Ordinal Series of Numeration, and hence with Movement, ( $\mathbf{t} 283$ ), is found in the Lengthwiseness of the Line, and then in that Analytical Aspect of it which distinguishes the different Drifts of Direction which are involved in this Lengthwiseness of any single Line whatsoever. Direction, as such, is a Peculiar Department of the

[^75]whole Domain of Form, which is for the present omitted, and which will be treated of in the next following Chapter. Tire Drift of Direction is something different from mere Direction, and must now be explained. The Procedure along any given Line from $A$ to $B$, or from the First to the Last end of it, is its First Drift of Direction. It is this which corresponds with the Anticipatory Method in Philosophy, the First Flight of the Human Mind, outward in pursuit of Truth, (c.3, t. 345), and with the Natural Order of Evolution generally (t. 6; c. 6, t. 345). The Return Course from $B$ to $A$, or from the Outer or Ultimate End to the Beginning, is the Second Drift of Direction. It corresponds with Reflection and Analysis, with the Inductive Method of Science, and with the Logical Order, in the Movement or Operation of All Things. Finally, the Reprojection then mainly fixed and secure, or the determinate Second Outgoing from $A$ to $B$, over the Track originally traversed in Uncertainty, and then painfully and cautiously retraced, is the Third Drift of Direction, and corresponds with, or repeats, the Deductive Method in Science, and the Artistic Order, or the Order of Construction in the Universe at large, and especially in the Conduct of Human Affairs (c. 6, t. 345). A somewhat similar explanation has already occurred concerning the Different Stages of the Evolution of the Logical Idea (t. 580). The following Diagram illustrates these Several Drifts of Direction, with their appropriate Notation:


From $A$ to $B\left(1^{\text {st }} \cdot 2^{\text {nd }}\right) 1^{\text {st }}$ is the Primitive Drift ; from $B$ to $A$ $\left(1^{\text {st }} \cdot 2^{\text {nd }}\right) 2^{\text {nd }}$ is the Second or Reverse Drift; and from $A$ to $C$ $\left(1^{\mathrm{st}} \cdot 2^{\text {nd }}\right) 3^{\text {rd }}$ is the Ultimate Drift.
617. The Natural and the Logical Order in respect to Movement may be, indeed, appropriately denoted by a simple
change in the relative position of the Figures of the Clef; thus $1^{\text {st }} ; 2^{\text {nd }}$ for the Natural, and $2^{\text {nd }} ; 1^{\text {st }}$ for the Logical Order ; but this Method of Notation exhausts itself with these two Steps merely, whence the one employed in the Diagram is superior to it, for ordinary purposes.
618. What corresponds, in the Domain of Number, to these features of the Domain of Form, is the Primitive Ascent through any Series of Count or Enumeration ; the Return or Reverse Procedure ; and, finally, the New and Assured or Rectified Procedure Outward. The Same Threefoldness of Drift is especially illustrated in respect to Calculation, thus : The First "Performance of a Sum" in Arithmetic is the Analogue of The Anticipatory Method in Science, and of the Natural Order ; "The Proving of the Sum" by reversing the Procedure is the Analogue of the Inductive Method, and of the Logical (or Scientific) Order; and the Ulterior Assured Completeness of the Renewed Calculation is the Analogue of the Deductive Method, and of the Artistic or Final Order, in the General Administration of Affairs. In the Renewed and Final Calculation, or in subsequent Calculation based upon the Habit of "Proving," there is still a remnant of the Primitive Liability to Mistake. Art is a Higher Repetition merely of Nature. In a certain High Rigorous Sense, both Nstural Form and Art Form (Dia. 10, t. 512) are Indeterminame Form, and Scientific Form alone is Determinate Fomm (Dia. 9, t. 509).
619. But all the Methods and Orders above specified belong still to the (Cata-)Logicismus as contrasted with the Analogicismus. They proceed along a Single Line, backwards and forwards, as along a Radius from the Centre outwards, and back, and thence again outwards. (t. 321, and c. 1-9; c. 1-7, t. 345). They are purely Inductive,-Deductive,-and Syllogistic, (c. 7, t. 321), excluding or omitting the Relation of Comparison or Side-by-Side-ness. Hence, in a more Extended Seriation, they all fall within a Subdivisional Distribution of a First De-
partment of the Larger and More Comprehensive View, which Larger View has, for its Several Departments in Trigrade Scale, 1. The (Cata-)Logicismus or Logical Order; 2. The Analogicisifus or Analogical Order; and, 3. The Pantological Order or Aspect oî Being, or the Composity of the other two. (c. 7-10, t. 15). As this Larger View is, however, New, and, in that sense, Exceptional, the Notation which relates to it will be, as in a former parallel case, constituted by the Addition of a Second Preclef (in full Parenthesis), which may then be dropped, and the Ordinary View restored without trouble or confusion, ( t .428 ) ; thus, ( $\left.1^{\mathrm{st}} .2^{\mathrm{nd}}\right)\left(1^{\text {st }}\right)$ for the Catalogicismus ; $\left(1^{\text {st }} \cdot 2^{\text {nd }}\right)\left(\mathbf{2}^{\text {nd }}\right)$ for the Analogicismus, etc. For the Anticipatory Method (c. 3, t. 345) within the Catalogic we then have $\left(1^{\text {st }} .2^{\mathrm{nd}}\right)\left(1^{\text {st }}\right) 1^{\text {st }}$; for the Inductive ( $i b$.) we have $\left(1^{\text {st }} \cdot 2^{\text {nd }}\right)\left(\mathbf{1}^{\text {st }}\right) \mathbf{2}^{\text {nd }}$, etc. By dropping the Second Preclef, the usual Notation is then restored.
620. The Analogical Method and the Analogical Side-by-Side-ness, in respect to Form, have their Numerical Analogues in Parallel Series of Numbers, and in Parallel Processes arriving at the same Solutions and serving in a still higher sense than mere Reversal of Process, to prove or sustain each other. The Pantologic of the Mathematics is the Unition or Composity and Mutual Corroboration of All Diverse Methods of Operation, Direct and Inverse.
621. Directly connected with the subject of Movement or Motion, and so of Order, Method, and Drift, is that of Force, and so of Mechanics or the Science of Force, and of the Balance of Forces. We are thus carried back and over from the General Direction of Careers merely as such, to Mechanology as the highest branch of Mathematical Science (c. 1, t. 231) ; for Motion is the Form of Force, as Form Proper is that of Substance, and hence the Existence and Laro of Force express themselves only through the Motions which it causes.
622. It facilitates the conception of Force to ally it with
some Object which manifests it, or in which it is manifested; and no Object is more favorable for this purpose than the Human Body. Force herein derived originally from its interior Source in the Mind expresses itself first upon the Interior or Vitals, and then Outwardly upon the Limbs and Members, and, finally, through them upon the External Objects surrounding the Body. In a Generalized Sense this Force is, 1. The Uncertain PusH-forth of the Hand or Limb by the Infant, till it meets with resistance, and Grasps an Object; 2. The PuLl or effort to Appropriate or to Unite with itself the Object seized; 3. The new and assured or skilled and confident Push or Thrust of the Weapon or Tool ; or the Compound Push and Pull. All of these, however, acting in the same Right Line, appear as one, when contrasted with the Sway (or Swagger) of the Body from Side-to-Side; as a second and different Variety of Movement. There is then, thirdly, the Compound Movements, writhing, wrenching, twisting, etc., which result from the Combination of the Direct and Sidewise Forces. The Push, the Pull, and the Reprojective Push are the Analogues of The Anticipatory Method (in Science), the Natural Order and the Primitive Differentlativg Energy of Natural Developient, for the Push ; The Inductive Metiod, The Logical Order, and The Scientific Integration of Ideas for the Pull; and the Deductive or Constructive Method, the Artistic Order, and the Successful and Efficient Opganization and Operation of the Stmple Machine, for the Reprojective Push. All these are, however, Simple or Simplistic, as compared with the Higher Order of Development now to be mentioned. These Simplisms taken Collectively as Unism, the Corresponding Duism is the Sway or Side-wise Movement, and the Corresponding Trinism is the Congeries of Composite and Univariant Movements and Uses derived from the Union and Co-operation of the Former two. The Push is the Primitive Repulsion, or the Unregulated Centrifugal Force of Na-
ture, (1); the Pull is Attraction, or Centripetal Force, and the Reprojective Push is Measured or Regular Repulsion. The Sway is the Graceful Curve and the Oscillation of the Planet in its Orbit ; and, finally, the total Mécanique Céleste answers to the Ultimation and the Combined Working of all the Forces involved.
623. Force is also denominated Power. In the Mathematical Domain, Powers are the Products of the Multiplication of a given quantity successively into itself. This Successive Multiplication, or the raising of a Series of Powers, is called Involution. The given quantities which produce the Powers by the Multiplication are called Roots. The Extracting or Ascertaining of these Roots from a Knowledge of the Powers is an Inverse Process called Evolution. Volution (Lat. volvo, to roll or turn)-whence Involution, rolling in, and Evolution, rolling out-suggests the operation of the Screw, as the Emblem of Force or Power, and hence Mechanical Operation generally. Involution is the Push or Lift to a Higher Power; Evolution is Extracting or Withdrawing, (which by a certain Antithetical Reflexion is in this Abstract Domain the more difficult Process). We have in these two, Analogically, therefore, the Push and the Pull of the Mechanical Domain; the Analogues of the Induction and Syllogistic of Catalogic. (c. 7, t. 321).
624. But, in Addition of the mere Raising of Powers, and Extracting of Roots in the Single Line or Series, Direct and Inverse, the genius of Baron Napier, Lord Murchison, discovered a Comparative Relationship between other Simpler Series of Numbers and this of Powers and Roots of such a nature that very Simple Operations relating to the Simpler of the Parallel Series might be effectively substituted, practicall: for the more Complex Relations of the Complex Series. This Substituted Simple Series, he, by a happy instinct, denominated
(1) See for the elaborate Conception of this the "Eurcka " of Edgar A. Poe.

Logarithms, or, as it were, The Spirit of Logic; for the basis idea of this Admirable Instrument of Mathematical Operations is the Side-by-Side-vess of different but related Series of Number ; in other words, the ScientoAnalogio existing between them. This, then, is the Analogue of a Style of Mechanical Movement Superior to the Mere Push and Pull ; as of the Piston in a Cylinder ; namely of Sidewise Movement, as of the Oar Sculling a Boat. The Screw-Movement is really, (though spoken of above without distinction from the Push and Pull), a True Artistic Composition of the Push and Pull with the Sidewise Movement. The Department of Considerations treated of above may be denominated the Mechanics of the Mathematics.
625. We have now sufficiently disposed, for the purposes of a Primitive Analysis, of the Abstractismus of Form. We should then, in the most natural order, return to the AbstractConcretismus. But this Department of Form, related to Chemistry, Physics, etc., is inherently obscure, and cannot be properly distributed without going into a minuteness of detail which would be neither very entertaining nor very intelligible to the beginner in this class of investigation. For this reason, and also for the sake of brevity, the subject will be dismissed for the present with this mere notice.
626. We come, then, immediately to the consideration of the Concretismus of Form, properly so called, or of The Conorete, in the Spencerian sense of the term.
627. The Primary Division of Concretology is into, 1. Regnology ; 2. Classiology ; and, 3. Stabiliology (Tab. 29, t. 391) ; but the Stabiliology so contained within the Concretismus is adopted and repeated from Stabiliology in the Larger View which is Abstract or outside of the Concrete Sphere of Being, and purely ideal ; it is, in other words, Endo-, as distinguished from Exo-Stabiliology. This last is, (as shown in the same Table), the Antithet of Non-Stabilio$\log y$,-related to it as Primary Abstract Limitation to Pure

Nothing-and they Two are the Bases and Constituent Factors of Cosmology, or of the Cosmos at large. The Concretoid Stabiliology (Endo-Stabiliology) denotes the Standard-Posture -and-Basis-Level, the Fundamental and Governing Limitation, of the Actual or Real World, as contrasted with Pure Space, as the Surrounding Medium and the Analogue of the Pure Abstract Nothing. These two, The Standard and Level, or Perpendicular and Horizontal, The First-Equated-and-Ad-justed-Outlay of the Actual World, and Space as its Negative Matrix or Container, are then, in like manner, the Two Prior Conditions, the Ideal Foundations, in fine, of the whole Cosmological Superstructure. Perpendicularity, Horizontality, and Inclination, or the Angle of Declination from these Standard-and-Outstretching First Limits, are then pre-eminently the Subject-Matters of Endo-Stabiliology.
628. These three, Perpendicularity, Horizontality, and Inclination, which so appear, in respect to Stabiliology, as Directional merely, then reappear immediately as the Governing Varieties of Figure assigned to the Three Kingdoms of Nature, or the Three Grand Departments of Regnology; the Mineral, the Vegetable, and the Animal Kingdoms, respectively. This has been already in part indicated (t. 607). These Grand Features recur here, however, in the reverse order ; that is to say, Inclination, Angulism, Punctobasic Form, or Goneology, appears lowest in the Trigrade Scale, as especially characteristic of Crystals, these in turn the Scientobasic Department of Mineral Science-so much so that Mineralogy, in its present popular meaning, resolves itself almost wholly into Crystalography, and Crystalography almost wholly into the Measurement and Relation of Angles. The Analogy of this Variety of Form with Trigonometry has been already pointed out (t. 608). The Mountain-top, or the Sierra, repeats the Angularity of the Crystal embedded in it.
629. The Typical Form, in a sense, of the Vegetable King-
dom, is then the Doubleness of two Opposed and Reversed Angles, as in the Outline of the two Nappes of a Cone. The General Figure of a Tree, with its Diverging Roots downwards, below, and its Diverging Plume upwards, above, is that of the two Cones so opposed to each other, while yet, in their Combined Posture, there is attained the General Conception of Perpendicularity. The Main Shaft of the Tree is Perpendicular to the Earth's Surface and Centre ; whence Perpendicularity is, in the more Elementary Sense, the Typical Form-Attribute of the Vegetable Kingdom.
630. Finally, the Main or Typical Form of the Animal is shown in the higher Vertebrate Skeleton, below that of Man; for in Man we have a Composity of all the Kingdoms, and of all Single Varieties of Form, which mark him as Something more, even in the Mathematics of his Physical Structure, than the Mere Animal. Of the Mere Animal Vertebrate, of the highest types, the Horse or the Ox, for instance, the typical Form and Posture are then Horizontal, as distinctively so as that of the Tree is Perpendicular. May combines the Formfeaturing of the mere Vertebrate with that of the Tree, and even subsumes more obscurely the Goneology of the Mineral ; as witness the shape of his coffin. ( $t$. 631).
631. Here, somewhat as previously, in respect to Nature, Science, and Art, (t. 522), the incipient learner will be apt to stumble over the fact that each of the three Kingdoms seems to abound in illustrations of almost every variety of Form and Posture, whereas, at this point, a Particular Variety of Posture or Positional Form is made typical of Each Kingdom. It is indeed true that there is a multiplicity of Special Types within any Single Kingdom, as the Animal Kingdom, for instance, and notably, within it, in respect to the four distinct Plans of Structure of the Four Grand Branches of that Kingdom, so much insisted on by Agassiz. It is, nevertheless, equally as true, that Horizontality is no less distinctive, in the Aggregate and Major Manifestation of the Animal World, than Perpen-
dicularity is so of the Vegetable World. Some Plants creep, some incline, some are round, but the erectness of the AxisStalk or -Stem of Plant, Shrub, and Tree, is the Prevailing and Governing Fact. So, in respect to Animals, not to go into details in the lower departments of this Kingdom, it may be said, 1. That the Vertebrate Constitution is the Dominant of this Domain; 2. That the entire aggregate of Animals without a Vertebral Column, however numerous and rich in Genera and Species, is accessory merely to the Vertebrismus; which is the same statement inverted; 3. The Beasts or Mammals are equally Dominant within this Higher Department of Animal Life; 4. The Vertebral Column which confers the name, is the distinctive Feature or typical Portion of the Superior Animal Structure ; and, 5. The Vertebral Column, especially in the Mammals, is as uniformly or prevalingly Horizontal as the Stalk of the Tree is Erect; and all the other parts of the Structure are adjusted to this arrangement. In the Human Anatomy, the Vertebral Column is repeated in the bony Structure of the Head itself (1), the Lengthwiseness of which is still Horizontal, while the Primitive Vertebral Column, that of the Trunk, rises to the Perpendicular, and repeats that of the Tree. (t. 630).
632. The Details of the Morphology of the Three Kingdoms belong to the Ulterior Development of Universology. Those of Vegetalogical (or Botanical) and Animalogical (or Zoölogical) Morphology will occupy us a good deal in "The Structural Outline of Universology," previously announced. It is the merest Outline of the Subject, therefore, which will be intimated here. We return for the moment, and glance again at Stabiliology. The following Diagram will exhibit its main features, both in the Concretoid and in the Abstractoid Aspect of the Subject, the two Compared and Contrasted with each other. Primary Abstract Limitation is Synonymous

[^76]with the Basic and Universalized Terms and Definitions of Logic ( t .580 ), and with these as contrasted with the Pure Nothing of that Order which is the Absence of All Term or Definition, that is to say, of all the Ideas of the Relative or the Limited.
$$
\text { Diagram No. } 42 .
$$

Figure 1. CONCRETOID.


Figure 2. ABSTRACTOID.

633. Existence, or Real Phenomenal Being, addresses itself to the Senses, and primarily and pre-eminently to the Sense of Feecing or Touch,-the Representative Sense of Sensation. Extension is, on the contrary, more purely a Mental Conception, related analogically to the Ken or Vision of the Eye, and so to the Sense of Sight. Put again Vegetism for Perpendicularity and Existence, and Animism for Horizontality and Estension ; the former set, Sensuous or Matteroid; the latter, Ideal or Mentoid. Within the Human Body the Vegetative System or Economy is accordingly Allied with the Erect Trunk, and the Animal System or Economy with the Horizontal Lengthwiseness or Longheadedness of the Head and Brain. This subject is, however, too intricate for a slight exposition, and must await a more extended opportunity.
634. Existence and Extension blend actually into One; whence arises the Compound Conception of a Cosmos ; and it is within this that the Three Kingdoms, Mineral, Vegetable, and Animal, actually exist; added to which are the Three

Stages or Stories of Classiology, furnishing the Sciences of Tellurology, Meteorology, and Uranology, respectively. The following Diagram, with a slight explanation of its parts, must conclude the present notice of Concretology :

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Diagram No.43.
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635. In this Diagram, and within the Globe-Figure or Cosmos, $A$ denotes a Range of Mountains, Single-peaked or Anguloid, as type of the Mineral Kingdom (t. 628); $B$ denotes the double-conoid Figure of a Tree, with its prevailing Perpendicularity, (t. 629), as type of the Vegetable Kingdom; and $C$ exhibits the Horizontal Attitude and Square Build of a Mammal, as the type of the Animal Kingdom. Above and to the Right, $D$ denotes the Earthy or Ground-Form Domain of Tellurology ; $E$, the Intermediate Region of Meteorology, abounding with the Misty Outline of Clouds, the Zigzag of the Lightning, etc. ; and $F$ denotes the Punctate and Radial Features of Uranology (Tab. 15, t. 278).
635. It should now be observed before dismissing the Subject, that, by a Modification similar to that described and applied to Abstract Elements, in Text No. 29, the Abstractismus of Science, and so the Light-Line-, and Middle Variety of Form, marked 2 in Diagram No. 22, t. 575, is virtually carried to the Top, the position of the Head in the Human Organization, furnishing the Light and Delicate Outline and Features of the Head and Face ; and that the Composite Form, marked 3, is then carried down and associated with No. 1; as the RightHand and Side of the Body with the Left; they two forming the Trunk as contrasted with the Head, (Dia. 2, t. 41); as again the Two Concretes are contrasted with the One Abstract (t. 248). Composite-, or Art-Form belongs with Action or Movement, and thus, in respect to the Mind, with the Will, and so with the Right Hand through which the Will is Executed; as Natural Form with Affection or Love; and Scientic or Abstract Form with Intelligence or Wisdom. Composite or Art Form is Tapering or Wedge-form, and Art, in the Large Sense, includes Artizanism, and so also the Principles of Mechanics. The Mechanical Principles, usually reckoned as Five or More, the Wedge, the Inclined Plane, the Screw, etc., are all reducible, by Universological Analysis, to One Principle, namely, that of the Wedge, or more simply to The Inclined Plane, which is one side of a Wedge, and finally, and in the last Degree of Simplicity, to Inclinism, or the simple fact of Declination or Inclination, as of the Single Inclined Line, the Same which, abstractly, denotes the Mathematics (Sub-Fig. 3, Tab. 25, t. 585). Concretely it is Force expressing itself in Mathematical Ratios. The Culmination of the Mathematics is in the Science of Mechanics (c. 1, t. 231). The Doctrine of Powers is the Central Region of Mathematics (t. 623). Power or Force is the Subject-Matter of Mechanology ( t . 621). Inclination is the Morphic Analogue of Power or Force, and so has relation to Mathematics in its governing and representative Domain.
637. The Culmination and Supreme Type of Inclinism is the Spiral. The Spiral or Spiralism, the Abstract Principle of Spiral Form, is a reguloid Continuous Inclination or Deviation in a reguloid Continuously Deviating Direction PLUS a reguloid Continuous Deviation in the Ratio or Successive Degree of the Deviation. Without the last clause of the Definition we have the Helix, or Helicism merely. Spiral is the Etymological Cognate of Spirit and Spiritual. Spirit and Movement are related, and, in a sense, identical ideas (t. 138). The Spiral is the Type of Spiritual Progression. The Interspaces of Concentric Circles, or rather Planoids, (onion-like), are called, in Spiritual parlance, Spheres. Concentrico-planoid Form, represented by a nest of such Planoids, is the Analogue of Primal or Primaceoid Being, Generaloid, Absolutoid, the Common Undifferentiated Fountain or "Great Deep," from which Specific Creation is Born or Proceeds. Radioid Form, diverging from the Universaloid God-Centre, crossing and cutting the Primalismus at rectoid Angles,' out-ward-tending in every direction, and disparting into Individual Radii or Rays, is the Analogue of Ultimated or Individualized Being ; each Ray an Individual, (its Outer End, Point, or Head, representatively Typical of the Ray); and, finally, Spiral Form, the Perpetual Transition and Mediun of Communication from Primalism to Ultimatism ; from the Great General Ocean of Diffused, Liquid-like, and Confluent Being ( $\pm=$ ), to Differentiated, Distinctified, and properly Created, Individual Existence ( $\mathbf{1 . 1} \mathbf{1}^{\text {st }}$ ) ; and inversely ; is the Analogue of Spiritual Being, or of, in Theological Language, The Holy Ghost, which mediates between God and Man.
638. The Mere Spiral of Real Lines is the Analogue of SpiritMatter, in the Grosser Sense of the Term, and Abstractly, of Pantologic, as the Conspiration of Catalogical and Analogical Reasoning (t. 619). (The two Drifts of Force at Right Angles, (Dia. 40, t. 616), generate, as Resultant Force, one of the Inclines in Dia. No. 30, t. 598, and Compound Inclination is the

Spiral ( $\mathbf{t} .637$ ). Such is the reconciliation of the Several Varieties of Form mentioned as Analogues of Pantologic, at these several Points of the Text). The Ghost-Lines which are thrown off continuously at each new angle of the Deviation, and fill all Space, represent "The Spirit" in a Higher and more Ethereal Sense, as the Essence of Logic; and finally, "The Spirit of Truth" as the Essence of Analogic, and the Highest and finally Governing Principle of All Being (a. 48, t. 204). Metáphysicians, Theologians, and Mystics will understand something of what is here meant, while, however, the Subject, as here presented, is a mere hint and text, or a foundation laid for ulterior expansion elsewhere, and by all who may choose to enter upon it.
639. A Geometrical Solid-Globe, Cube, etc.-resolves itself, by Analysis, into a Fasciculus of Surfaces. A Surface resolves itself, by Analysis, into a Fasciculus of Lines. A Line resolves itself?, by Analysis, into a Series of Points. c. I. A Point resolves itself, on minute consideration, into an Ideal Globule infinitely small. The Ideal Globule, steadily regarded, expands into an Immense Ideal Globe, and the Ideal Globe is again, through this return to the Primitive Aspect, a Geometrical Solid. This is the Necessary and Exhaustive Rotation

[^77]of Thought, through Analysis, and back to Ideal Construction. The same Order of Evoluition and Re-involution occurs in the Concrete Domain, or the Actual World. It may be repeated, exactly, upon Real Solids, Surfaces, Lines, and Points, the same as the Abstract Ones plus Substance or a Real Value ; or, more vaguely, and with more Artistic Modification, thus: The Globular Solidity of the Earth exfoliates into Geological Surfaces ; the Earth-Surface produces and delineates itself in Trees (Vegetábles) which are Concrete Lines; the Tree, first through the Analogy of Buds and Blossoms, and then, in a higher sense, in the Animal, which repeats the Blossom,--evolves and resolves itself into Animated Points. The Highest of such Animated Points is Man. Man, in the Absolutoid Aspect, is a Spiritual or Abstractoid Atom, a Mere Ideal Point ; Contemplated in Thought, or Developed in Form, he enlarges to a Seusible Size, a new World, which repeats and echoes to the Earth-World from which his Evolution and Reinvolution, in this Natural Order of Progression, proceed. If for the Commencing-Globe of this Circular Career we put The Universe instead of the Earth-Ball, then also does Man return to the Primitive Goal ; for Man also-each Individual Being-is Potentially, and in a certain sense Actually, the Entire Universe ; or A Universe equal to every other, and to the One Inclusive Universe ;-as an Embodiment of All Possible Principles.
640. This Echo and Parity of Career between the Constituents of Pure Form in the Thought, and the Constituents of Real Being in the World, illustrates the Fundamental and Most Important Concretoid Principle of Universology ; тне Analogy between Matter and Mind. This Principle is consigned to the following Formula:

Identity of Law in Matter and Mind;
Or, otherwise expressed :
The Parallel or Repetitive Order of Development in the Concrete and Abstract Domains.
641. At one point Duism has been spoken of as tending to Bi-furcation, or a Splitting into Two Branches or Modes of Manifestation (t. 281), while in another sense Trinism might as well be so characterized. In strictness, Duism tends to Simple Bi-furcation or Doubleness of Development, which then, by the necessary or natural neglect of one of the two branches, while the Attention is commanded by the other, sinks, at the given instance, to Unity. Trinism tends, on the contrary, to Tri-furcation, which first by the minor importance of the intermediate branch, (as of the Ambigu's between Vowel- and Consonant-Sounds), falls first into a Doubleness merely, and then throws one of the remaining branches into doubt, (as the question is raised whether a Consonant is a Sound at all, or a mere limit on Sound). The Trinism, that is to say the Com-pleteness- or Art-Domain, is thus made dubious, as between One and Two ; or at the Height of the Trigrade Scale, as between Three and Four ; a dubiosity which is resolved by regarding it as $3^{1 / 2}$, (c. 39, t. 503 ; t. 611).
642. The Abstract First Distribution of the Elements of Being, whether into Unism and Duism, or into Something and Nothing, seems to be a mere Bi-furcation ; and the Real Distribution of the Concrete World by Trigrade Scales, to be a Tri-furcation. This Seeming or Obvious Presentation brings us into relations with the Orderly Evolution of Cardinal Numeration, as the Canon of Criticism on all our Distributions, as previously intimated (t. 478). This Law of Successive Increasing Complexity in the Branchings of Higher and Higher, or Finer and Finer, Scales of Distribution is illustrated in the following Table:

## TABLE 41 .

5. Pivoted-Equated Distribution, etc.
6. Equated Distribution, by Distinctification of the Bi-furcated Third Term.
7. Concrete Distribution, by Trigrade Scales, of the Real World.
8. Abstract Distribution of Law into First Abstract Principles.
9. Undifferentiated Unity of Being.
10. But notwithstanding the appearance, and the practical advantage of the recognition of these Successive Varieties in the Law of Evolution, yet in the Absolute Analysis of ScientoPhilosophy, they are all reducible to one and the same Model. The Abstract Distribution (No. 2) is primarily Twofold, but secondarily Threefold (with the incidental addition of all the more numerous Styles) ; the Concrete Distribution (No. 3) is, on the contrary, primarily Threefold, but secondarily Twofold, (the Order of Predominance reversed hereby, with similar incidental Additions, etc.). To illustrate: Take the Undifferentiated Unity of Being as Unismus; its Division into Something and Nothing, or the Something-and-Nothing-Stand-ing-against-each-other, is then, Conjointly or Collectively, the Duismus ; and, finally, the Compound Unity of the Unismus and the Duismus is the Trinismus. This is the Concrete Aspect of the Subject, (No. 3), and the Distribution is Threefold, reducible to a Twofold One, however, by casting the Primitive and the Ultimate Unity together as against the Dual Middle Stage, as the Two Concretes are contrasted with the Abstract (t. 248).
11. Abstract now the Something and the Nothing, and consider them separately, applying the same Principles. These are the Abstractismus. Here the Something and the Nothing in their Separateness and Difference are a Duismus as before ; and within the Interior Character of the Two, the Something is Unismal, and the Nothing, (Excluded, Separated), is Duismal, this being apparently the whole of this Abstract Distribution (No. 2). But on a closer inspection the matter stands thus: Something and Nothing, in their difference, but Conjointly or Collectively, are Duismus ; but Something $=$ Nothing ; and Equality is itself Unity of an Ideal or Logical Kind. This Logical Unity, their recondite character of Sameness underlying their difference, is Unismus; and finally, this Duismus and this Unismus conjointly are the Trinismus,-and all of this without ascending out of the Pure

Abstract. This Series so repeats inversely, but identically, the former Concrete Series, (No. 3), quod erat demonstrandum. It would require too much nicety of discrimination to trace the still greater Complexities of the Higher Numbers. This is the Domain of Intellectual and Transcendental Gymnastic, and it will suffice here simply to open the door for an instant, and cast a glance at the performances.
645. We hare thus passed hurriedly, and in a preliminary sense only, over the Form-Analogues of Echosophy; those of the Philosophical Domain, more interesting if possible, while yet more minute and closely analytical, must be for the present entirely omitted, on the sole ground of necessary abridgment. They will appear, in part, in treating of the Morphology of the Vegetable and Animal Kingdoms, in subsequent works embracing those subjects. In part, they must await a more minute exposition elsewhere.
646. The attentire reader will discover, in what follows in this Chapter, a return in part to Matters relating more to Number than to Form, and some repetition-not in the same terms indeed-of Principles already stated in this or the preceding Chapters. This is due in part to the intrinsic importance of the Subjects, but more to the new Force the Principles will acquire by collating them directly with each other, and with new and raried applications, for which the Mind of the investigator was not, at the previous mention, so well prepared.
647. Something and Nothing have been spoken of, in what precedes, as Hemispheres of the Total Sphere of Thought. This is, by remote Analogy, symbolically justified. The actual and immediate Analogue of the Metaphysical Something, as an Element of Being, is, however, The Thing, whatsoever it be ; and typically, or in a leading sense, a Planet or any Celestial Orb, as a Grand Thing, or more especially still, The Earth which we inhabit.
648. The corresponding Analogue of the Nothing-Element
is then the Blank Space in which the Planet floats, and by which it is penetrated and surrounded.
649. The Concreteness, in this view, is the Indiscriminate Aggregation of the Material Substance infilling the Space and of the Space infilled by it; furnishing the total Presence or Prospect exhibited. The Abstract is then these Elements, Factors, or Constituents, in their partial Apartness, as we strive instinctually and then reflectively to separate them in our minds from each other.
650. The Consistency of Real Being is, in fine, the Higher Compound Unity in which we partially accept the Concrete blending of Elements, and partially strive to abstract them, that is, to place and retain them in their separate entity ;these two drifts of mental tendency again co-operating and interblending with each other. Thus step by step the Complications of Being arise out of Simpler or more Primitive Elements.
651. The Consistency of Being is then the Analogue of the Total Domain of Number, based on Zero, (0), and ascending from the basic Unit above Zero up to Infinity, or the Infinitely Numerous ; a Scale of Ascension which we instinctually divide into High and Low Numbers.
652. All Matter involves a Something-Element-the true Substance, or Material, or Stuff, and a Nothing-Element-the Interstices of Space-whence it derives its Porousness and Compressibility. The Something-Element repeats the Atoms, or Objects, or Planets, in Space, the Earthy Body. The Nothing-Element repeats Space generically, the Air as the cognate finer Substance of Space, and the Breath as the Air drawn into and expelled from the Body. The Analogue of this intimate Combination of the Something- and the NothingElements, is, in the Domain of Number, the interspersion of Zeros in all Numeration along with Units or Significant Numbers, which then derive their Spirit, or Relative Values, from these interspersed Zeros which correspond with the Pores of

Matter, (the Inter-Atomic Spaces), or the Air-Cells of the Lungs c. 1, 2.
653. This functional use of the many Zeros corresponds with Spaces, and not with The Universal Space which surrounds and contains all Materials, or upholds them as a Ground. The Analogue of this last is the Single Zero (0) below the Total Series of Numeration, and equal to all the Positive Numbers above it, denoted by $1=$ all. This Zero, (0), the Analogue of Universal Space, has been described above as occurring in two forms, (t. 647), once as a Hemi-

Commentary, t. 652. 1. There was no efficient Mathematical Notation prior to the Arabic, which consists of the nine digits and the zero. The excellence of this system mainly depends upon the addition of the zero.
2. It has perhaps never been distinctly observed that there are in fact two wholly different Styles or Orders of the Series of Digital Numbers,-if we so name the first ten Numbers of the Cardinal Scries,-according as we begin with Zero or with Unity; thus:

$$
\begin{array}{lllllllllll}
0 & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & \text { - Netaphysical or Logical Order. } \\
& 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 \text { - Scientic or Natural ORDer. }
\end{array}
$$

This is merely the Developed or Lxtencled Seriation which is incipiently indicated in the two Clefs

$$
\begin{array}{lll}
0 ; 1 & \text { Philosophical. } \\
1 ; 2 & \text { Echosophical (t. 12). }
\end{array}
$$

There is an intricacy involved in the naming of the two Orders, as introduced in this Commentary. The Scientific Order has now become the Natural Order. The Cause of the seening Contradiction is ton subtle for exposition at this point. In this manifestation it is not, however, without its practical bearings upon the Simplest Applications of Figures, as in the following illustration. An attempt has been made to arrange the books in one of the Boston Public Libraries decimally, so that the number of a book in the printed Catalogue should correspond with its place in the Alcoves. The Alcoves are numbered $1,2,3$ and upwards; in each Alcove are ten ranges of shelves, numbered fiom 1 to 10 ;-there are ten shelves in each range, and the books are placed in the order of their numbers on the shelf. Thus the book numbered 1.2.3:16, is book No. 16, on shelf 3, in range 2, Alcove 1. All this seems very well ; but, from a non-recognition of the facts that a Decimal Arrangement and a Decimal Notation are two different things, and that there is more than one kind of decimal Arrangement, as there is also more than one kind of Decimal Notation, the numbering and the position of the books were not found uniformly to correspond, to the no slight inconvenience of
sphere and once as a Surrounding Matrix of Thing or Positive Being. These two Modes of Conception are represented, translated into Analogous Forms, in the following Diagram :

Diagram No. 4.

Figure 1.
Figure 2.

Figure 3.

654. Fig. 1 represents the Union, hemispherically, of the Something and the Nothing, or Numerically, of the One = All and the Zero, (0), in the Logical or Scientic Order, which prevails, of course, in the Abstract Mathematical Domain. The Nothing or the Zero is here below, and the Something or the
the librarians. Book No. 2.0.3:16 is found, not on the third shelf, in the 0 range in Alcove 2, but in the 10th range in Alcove 1. And so on for more than one-tenth of the books in the library. Besides, for books No. $9.9: 16$, No. $1.0 .9: 16$, and all numbers below 1.0.9, no alcove or shelf is provided. In carrying out the proposed decimal arrangement, it was found convenient to number the shelves in the ranges from 0 to 9 , but the ranges and alcoves were numbered in series beginning with 1 . It seems, therefore, that the principle requiring the numbering of the alcoves, ranges, and shelves, by a decimal series beginning with 0 , and ending with 9 , in order to correspond with the peculiar decimal arrangement of the Arabic Notation, was not discovered or discerned. The difficulty was seen, but its nature and cause not understood, and the proper remedy not provided. The practical remedy for the Boston Library is, to move all the ranges of shelves (or the numbers of the ranges and the books in them) forward one place in the alcoves, so as to make the 10th range in Alcove 1 , the first or 0 range in Alcove 2 (or number the 10 th range 9 , and move forward the books in it to 0 range in Alcove 2). This, however, would leave the first or 0 range in Alcove 1, empty, to fill which and provide for the Numbers below 1.1.0, a new 0 Alcove and books to fill it should be provided.
(Infinite Positive) Unit abore ; as, logically, there must be Space as a Negative Ground before there can be Thing or Real Being as a Content of that Continent, or an Elevation or Existence, (Lat. ex, out of, and stare, to stand), above that Ground. Zero accordingly occurs in the Ordinary Seriation of Number, before the Unit, and as a Basis or Ground,-the Lowest of Logical Foundation.
655. Fig. 2 represents the same connection of ideas reversed. They here stand in the Natural Order, which is illustrated in Nature by the Material and Solid Earth,-the Footstool of the Observer,-as the Something ; and the Dome of Sky and Air above the Earth, as the Nothing (or Zero). These are the Matter-and-Space-Analogues of the Visible World, as it lies in prospect before and around me, when I stand as at $a$ on the Earth, and existing, as it were, between the Earth beneath and the Open or Vacant Space above me; and centrally, or equally removed from the Horizon in every direction. The Open Space above assumes then, by the Laws of Vision, the Appearance of a Dome, or Superincumbent Hemisphere; and then again, by a Principle of Analogy which will frequently occur, and which is accounted for in the next following paragraph, the Earth-Element below assumes symbolically the appearance in thought of a counterparting Hemisphere, as exlibited in the Diagram.
656. The Principle here adverted to, in accordance with which, whenever a symmetricoid side of any conception is given, there is a tendency in the mind, and in Nature herself even, to fill out the Correlative Side which is wanting, in some mode of Corresponding Symmetry with the side which is given, is what has been previously formulized as Tendency to Equation (t. 535).
657. Of these figures 1 and 2 , each represents a Uni-directional Order from below upwards, or inversely. This corresponds with a Special or Seriated Numeration, as in the Ordinary Numerical Series.
655. Fig. 3 represents the Something-Element at the centre as a Globe or Planet, or, for example, the Earth-ball entire, and the Nothing-Element as the Universal Space surrounding and embracing it. This Omni-directional (Lat. omnis, all, and directio, direction) Order corresponds with the Generalized Groupial character of the Cardinal Numbers taken in Mass,-any Given Group of Units Massed or Gathered, and turning, as it were, around the single unit,-whichsoever one is selected,-as the Pivot or Centre. The Surrounding Zero or General Space is then the Matrix in which all other Units are to be sought, lying more remotely outwards, as the other Planets or Stars are found in the outlying Space from the Earth or any given Planet.
659. The two Orders, Logical and Natural, also occur here, but in a Generalized Sense, applying equally upon any radius of the circle ; or, in a general way, upon all radii synchronously.
660. We have hitherto been occupied chiefly with the Analorues of the Cardinal Numbers only. These, as Groupial or Collective in their Character, are Space-like, and at the same time Static or Stationary, or, as it were, at rest.
661. The Ordinal Numbers, on the contrary, by virtue of their Successivity,-One Unit succeeding another in an Orderor Line-like Procedure by successive Points or Steps,-are Serial in their character, and Time-like, that is to say, they suggest the idea of, and have in them a natural analogy with, Movement along a track or pathway, as Events occur in the current of Time.
662. The Cardinal Numbers correspond therefore with the Universe in Space, and as if arrested or solidified, in respect to Movement or Change in Time ; and the Ordinal Numbers correspond with the Universe of Events or Occurrences in Tare, and with Protension, (forthstretching), as contrasted with Extension in Space (t. 220).
663. These are Fundamental and Important Descriptions of

Space and Time, which will be resumed at other points. They occur here only as related, by Analogy, to these two grand fundamental Series of Numeration.
664. The Static Existence of Universal Being in Space may be denominated The Solidarity of the Universe; and the Motic Existence of Universal Being in Time may then be distinguished as The Continuity of the Universe, and is fluid, currental, or flux-like in conception (t. 26).
665. Rest or Station corresponds with Space;

Motion, Movement, Change, or Eventuation corresponds with Time.

Being corresponds with Instantiality, or the Vivid Instant ; the Point of Contact between Space and Time (t. 561). 666. Station and Motion in Space and Time collectively make The Consistency of the Universe.
667. The Consistency of the Universe re-divides into 1. Existence, which is substantially Synonymous with Solidarity ; and, 2. Movement, the Grandis Ordo Eventrum. In theological language these are, 1. The Creation; and, 2. The Order of Providence (Tab. 9, t. 144).
668. The Cardinal Numbers are again, therefore, representative of the Creation, as it stands, hinging upon Divinity as Unity, and hence upon Theology as the Science of this the Central Focus or Fountain of Being.
669. The Ordinal Numbers are in like manner representative of the Order of Providence, or the Perpetual On-going of Events, under the Divine Guidance and Direction.
670. We may now put a Planet moving through Space as the Analogue of the Total Creation, or of Solidarity of Being, as has been done virtually in the last preceding Diagram (No. 44). We may then attach to it, as a train or trail, the chain of Globoid Positions which the Planet has successively filled from moment to moment in Space, as the Analogue of its Movement, and hence, of the order of Procedure of Providence, or of Events in Time. The Diagram below exhibits the Com-
pound Figure resulting from the combination of these two Analogies:

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Diagram No.45.
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671. The Compound Figure so resulting, in the Diagram, contains, as will be more fully shown elsewhere, Nature's Primitive Sketch of the Typical Plan of the Human Figure, the bony frame, -the Skull and its Train of Vertebræ. The Space-Analogue constitutes the Head, and the Time-Analogue, the Trunk of the Figure. Technically, the Head is the Cardinismus, and the Trunk the Ordinismus, of the Human Organismus, and hence of the Entire Human Figure, which is then the Analogue of the Universe in respect to its Total Consistency in Time and in Space.
672. Let us, for the present, set aside the Continuity, or the Ordinality of the Universe,-its manifestation in Time,-and confine ourselves to the Consideration of its Solidarity, Cardinality, Consistency, or Existence in Space.
673. Objects conceived of as Integers or Wholes, of which the Planetary Bodies are the best illustrations, have a relation to Integers or the Integral Series of Numeration ; and Fragments or Fractions of the Single Planet, as the Minerals of the Earth-Globe, have a similar relation to the Fractional Series of Numbers.
674. More rigorously and scientifically, it is the Sections of the Heavens without, and of the Earth within, marked off in Quadratoids or Proximate Squares, by the Lines of Latitude and Longitude, Celestial and Terrestrial, respectively, which correspond with the Integers and the Fractions of Arithmetic.

This analogy is, however, too special and Scientoid to be elaborated at length at this point.
675. Coming down from the Heavens to the Earth, we next encounter the Consistency of the Planet in the limited sense in which that term has been, and may be, still, usually employed. Technically it is the Stato-Consistency of Being which is here intended. It is this which Professor Henry, as previously quoted, divides into the Solid, Fluid, Aeriform, and the Etherial States or Conditions of Matter (t. 63). There should be added at least another State, intermediate between Solid and Fluid, which is the Slush or Slime or Soil of the Eartly Mass, and which corresponds with what the Anatomists have appropriately enough denominated the "Soft Solids" of the Human Body.
676. The terms Solidarity, (Solidity), and Fluidity have just been employed above with reference to the Cardinality and Ordinality of Being. They are here confined to a narrower circle of meaning, in the same manner as the term Consistency has just now been also restricted t. 675).

67\%. The Grand Solidity of Number is the Aggregate of Values and Functions which are the Subject-matter or Material of Mathematical Operations.
678. The Grand Fluidity of Number is that Confluence of Numerical Quality which is, properly speaking, Numerical Magnitude. It is that which is generalized and expressed collectively by the three Signs $+-=$ (plus, minus, equation). The Analogies of this Distribution of Number with the whole Science of Generalogy have been previously pointed out, (t. 337), and also its relation to the Liquidity of Sound, as in the Liquids $M, N$, and $N g(t .570)$.
679. The Plus or Major Magnitude of Quantity is the mounting of the Fluid Wave abore the normal level of the Great Deep. The Minus or Minor Magnitude is the Subsidence of the Wave beneath the level. Equation is the Water Level (t. 566).
680. The Constants and Fluents of Number, as special Mathematical Designations, repeat, by subsequent Echo of Analogy, these first Numerical Grand Analogues, Solidity and Fluidity.
681. Logarithms are the Aeriform Consistency of Numeration, the Extract or Spirit of the general Consistency of Number.
682. The Spiritual Significance, or Meaning of Number-as Unism in the place of Unit, etc.-is, finally, the Etherial Consistency of the Numerical Domain.
683. The several preceding Distributions of Number, with their Analogues in the General Distributions of the Universe of Being, are resumed and collectively exhibited in the following Table:

684. We may now again narrow the range of Observation, and confine our attention to the Analogy of Solid Bodies with Numeration. In the Solid Object, Typical of all Object or Thing, we have, 1. Substance; and, 2. Form, as the Grand Factors of the Unit or Thing.
685. Substance is theoretically composed of Atoms. Atoms repeat or are the Analogues of Geometrical Points, and

Geometrical Points repeat or are the Analogues of the Constituent Units of Number. c. 1.
686. The Substance of Number is then the Congeries of these Units, Abstraction being made, so far as possible, of the Connections, or Lines of Relation in Thought, (the Form Element), between the Individual Units (t. 503).
687. Form, as Abstract Element, in the Constituency of Number, consists then of the Abstract Lines of Thought which we interpose between the Units, and by the aid of which we constitute the Separate Units into Sums. One and another One, for example, do not constitute the Sum which we call Troo, until we have interposed, in Thought, a line of connection between the individual Units ( t . 503).
688. This abstract consideration of the Subject is very attenuated and abstruse, but very important. It will be resumed elsewhere, and not now further insisted upon.
689. Substance and Form, when united in the Concrete Object, are again partially separated as they are manifested by different classes of Objects, in some of which the Element of Substance preponderates, and in others of which the Element of Form is most ostensible.
690. We have first a class of Objects which go back to, and repeat by correspondence, Substance abstracted so far as may be from Form ; and then another class which are Types of Form. The former are usually denominated Substances, and the latter Things.

Commentrery, t. 695. It may be understood from this what Swedenborg means when he affirms without explanation that Number is "Natural," and corresponds with Quality (A. R. 10). Number, Nature, Quality, and Substance coincide, as contrasted with Meusure, Science, Quantity, and Form (a. 28, c. 32, t. 136; a. 55, t. 204). Swedenborg also says elsewhere that "the same Number which signifies what is full and sufficient,"-round, globose, groupial,-"when it is predicated concerning Quantity,"-static extension,--"signifies Duration when predicated concerning Time" (A. E. 548). There is here apparently a dimpereeption of the relation of the Cardinal Numbers to Space, and of the Ordinal Niumbers to Time (t. 300).
691. For example, the Earth, Air, Fire, and Water of the Ancients are Substances; that is to say, they are mere Masses of Material or Stuff, wholly indefinite in respect to Form. It is the same with the Substances of which our bodies are composed, without the necessity of going so low as the Chemical Elements; the Fat, the Sugar, the Starch, etc. The Substantives which name these Form-less Substances, are grammatically non-pluralizable, because they do not exist as things capable of being numbered. (Number is itself the incipiency of Form, still nevertheless, allied with Substance.) If we sometimes say Sugars and Starches, the plural form is used in an exceptional way, to denote Kinds of Substances, or, at most, different parcels of the same substance, and not as naming different individuals, as when we say Houses or Horses. These Non-pluralizable Substantives may be denominated Substancive Substantives.
692. Pluralizable Substantives denote Objects in which the Element of Form is at least distinctly cognizable. But here we meet in a Subdivision what is characterized above as a Partial Separation of Substance and Form, in the different classes of these Objects. The difference just stated above finds its Numerical Analogue in the Common Apprehension of $N$ Vumber as a mere Aggregation of Units, for the Substancive Aspect, or for Substances ; and in Numbers analyzed as to the Formative Lines of Thought which constitute them into sums-a new universological Process-for Teirvas (Pluralizable Nouns). These are Morphic Substantives.
693. In the Subdivision of Things, now under consideration, it is thick, heavy, globose, or club-like Objects which represent Substance in Preponderance, in the Domain of the Concrete. These have their Numerical Analogue in Applied Numbers. It is, on the other hand, thin, light, expanded, or gossamer-like Objects which represent Form in Preponderance, or else those which are scrawny or liniar, as the Skeleton, which is the form-giving framework of the Body. But even
here, a person who has but little flesh is designated as thin. These objects have as their Analogue Pure, Unapplied, or Mathematical Numbers.
694. These two varieties of Objects correspond with, or repeat, also, what the Metaphysicians mean by Empirical, and Pure Object, respectively. The Substantives which name them may be called Substantial or Heary Substantives, and Morphous or Light Substantives, respectively.
695. It is with Unapplied or Pure Numbers, and their Analogues that we have mainly to do ; for it is among Light or Trivial Objects that we find the instruments of measurement, and the types or miniatures of the Heavy or Cosmical Objects of the Universe ; precisely as it is with Unapplied or Pure Numeration that we treat scientifically of the Problems which concern the Concrete World of their ultimate applications.
696. We come, finally, to the most important of all Numerical Discriminations, if we except Unism, Duism, and Trinism. This is that difference which furnishes, 1. The Series of Odd Numbers ; 2. The Series of Even Numbers ; and, 3. The Compound Series of Odd-and-Even-Numbers, alternating and interblending with each other in a Balanced Vibration of mutual relationship. This discrimination is exhibited in its greatest fullness within the Cardinal Series of Numbers. The Morphic Analogues of these Numerical Series will appear in the next Chapter (Dia. No. 57, t. 843).
697. The Odd Number Series corresponds with the Number One, (1), the Head of that Series, and with Unism, or the Spirit of One. It is therefore Unismal.
698. The Even Number Series corresponds with the Number Two, (2), the Head of that Series, and with Duism, or the Spirit of Two. It is therefore Duismal.
699. The Compound, Odd-and-Even Series corresponds with the Number Three, (3), the Head of that Series, and with Trinism, or the Spirit of Three. It is therefore Trinismal.
700. These Three Series in their primitive Synstatism, that is to say, as undistinguished in the Mind into different Seriesa Unismal Stage of Conception ; then in their Analysis as three different Serial Aspects-a Duismal Stage of the Conception ; and finally as recombined into a Synthesis-a Treismal Stage of the Conception,-all of these Aspects conjoined in a Uni-variant Compound Unity correspond with One, (1), Two, (2), and Three, (3), as the Joint-and-Several Head of the entire Numerical Series, in its jointness and in its severalty, respectively. This Uni-variant Head of Number in the Balanced Vibration of its Wholeness and its Parts is then the Analogue of Tri-unism, the Ultimate Composity of the three Constituent Principles, Unism, Duism, and Treism.
701. Pluralizable Objects are, as we have seen, the General Analogue of Things, as distinguished from mere Substances. These divide into Singleness and Plurality, expressed grammatically as the Singular and Plural Numbers of Nouns, respectively. Singleness corresponds with the Number One, and Plurality with the Number Two, as the Head of all Plural Number. Singulism and Pluralism are thus the primitive and crude Aspects of Unism and Duism.
702. But the Number Two reappears immediately in its own right, not now merely as the Head and Representative of the immense family of Plural Number. In this new and specific sense it corresponds with the Dual Number of the Grammarians, which is also confined specifically to the Number Two, as contrasted with the larger aspect of General Plurality.
703. The Analogue of the Dual Number in the constitution of the Universe at Large is that class of objects or things which go in couples or pairs-Things which are symmetrically adjusted to each other, as Hemispheres, for example, when each has an individual entirety of its own. Such objects are Even, or Equated, one with the other, or correlative and tendentially correspondential with each other. Objects not so
arranged are Odd, and not Even. It is in accordance with this difference that we speak of Single Men and Women, as contrasted with those who are married, that is to say, paired or evened ; and of Singuilar Individuals, otherwise called Odd, Original and Eccentric. One, the Primitive Odd Number, is Original, as the Beginning of Number, and it is Eecentric, as being one-sided, or away from the Balancing Pivot or Centre which intervenes between the individuals embraced in a Pair.
704. From Dual Number, pre-eminently Even or Paired, we pass readily over to the conception of Grammatical Gender, which in respect to the Universe is Sex. This results from the fact that of the two Units or Individuals, coupled in the Duad, cne is Originative, Generative, and Projective ; and the remaining one, Receptive, Conceptive, and Reproduc-tive,-the one brought first into view, the other subsequently.
705. The Male Principle reappears in connection with the Female Principle, in one Single Human Body, and that the Female. The Male Principle is herein represented by the impregnated Fœtus. The Fœtal or Embryonic Life (AnteNatal) then becomes Original or Generative, with respect to the career of the individual, through the successive stages of his earth-life ; that is to say, the Embryonic Life, prior to the event which we call birth, repeats the backlying paternity or ancestry of the Man, as the Source or Origin whence he is derived. The Principles of Creation are, in similar manner, the Origins of Universal Being. They impregnate the Foctus of Matter in the Womb of Space and Time, and are thus transferred to the developing germ of Creation. Embryonic Life thus becomes the Analogue of the Prima Capita, First Heads or Principles of Being, as the man, subsequent to birththe Train of Events constituting what we ordinarily mean by Life,-is then Consequential upon the events of that prior life within the Precincts of the World of Canses. The Antenatal and the Post-Natal Life stand thus related to each other
in Time, as Cause and Sequence. Sex thus passes over into Generation, or the Successive Generations of Men in the Historical Career, passing down along the Current of Time.
706. Generation has also its Numerical Analogues. The Primitive Unit broken in two, furnishes, as we have seen, the Male and the Female Unit. By the Copulation of these two, another unit is generated, and so on to Infinity. More largely, the three Numbers, One, Two, and Three, are the Principiismus or Domain of Principles, being as we have seen, the Head Numbers of the Numerical Series. The Series itself, as following from this Head, then repeats the Successions of Generations in Time. But we have now inverted the order, by assuming this larger view, and it is the Head of the Human Being as the Domain of Higher and Reflective Principles, Scientific, instead of Natural, which is now represented by these Head-Numbers ; and not any longer the Fœtus, which is the Head of the Individual, in the Natural or Historical Order only. It is the Head itself which is the Head of the Individual, in the Logical Order. We have here an instance of what is meant by Terminal Conversion into Opposites. But the subject is becoming too detailed and abstruse for our present Elementary purposes.
707. By considering the Cardinal Numbers as a Series, we bring them into a nearer relationship with the Ordinal Numbers. This is only because any arrangement of Entities or Ideas, when Seriated, resembles or repeats the Specific Ordinality of the proper Ordinal Numbers. It is thus that any Track or Procedure through Space, as along the surface of the earth, for example, repeats, and corresponds to, the Track of Universal Procedure or Eventuation down the current of Time. Hence we apply the term Series to the Cardinal Numbers almost as appropriately and readily as to the Ordinals. The Cardinal Numbers are in strictness, however, a Series of Groups, a Group being put here, in each instance after Unity, in the place of the Single Unit of the Ordinal Series (t. 155, 155).
708. A Series of Numbers may be, in the next place, either a Measured Series, corresponding then with our Measuring Rods or Rules, or other instruments of measurement and exactification, or it may be a Free and Unlimited Series, as the Number of the Sands on the Shore. Fourier was the discoverer of this difference in the kind of numerical series, in respect to its bearings analogically upon the Distributions of Nature throughout the Universe of Being. The lower ranges of Being are, as he points out, distributed in accordance with the Free Series of Number-a mere unlimited plurality. All the higher and choice Departments of Being are, as he affirms, distributed in accordance with the Measured Series,-Three, Seren, and Twelve, predominantly. These he calls the Pivotal Numbers, and points out that they are also the Sacred Numbers of the Theologians. He compares Nature's Distributions, in Free Series, to Prose Writing, and her Distributions in Measured Series to Poetry. This is the meaning of his mystical but significant formula, "The Series distributes the Harmonies."
709. If a Series be limited or measured, it may chance to cross another Series, and by the Copulation of those two, there may then be generated a new Series of another order.
710. I have thus endeavored to exhibit the Analogy, within the Domain of Number, of Generation and Geneological Seriation or Descent. This effort, however, may be far more satisfactorily accomplished, after the aids which will be obtained in the next Chapter from the analogical exposition of Form.
711. A slight review of what has been accomplished in this Chapter, with the Analogues of Number and Form, and a few new considerations upon the Subject, will conclude the present Chapter, and also what is essential to be said, in this preliminary way, upon this abstruse Subject.
712. I return to the consideration of the Something and the Nothing, or, numerically considered, to the whole field of Positive Numbers, the Analogue of Substance or Matter, contrasted
with the Universal Zero, the Analogue of Space. The very fact that these are coupled or paired as Two, or as Hemispheres, involves the counterparting idea of their Wholeness or Spherical Unity in another sense.
713. We have therefore Unism, or the Spirit of One, represented in the aspect of Wholeness or Sphericity of idea, that absolute Unity in which the Something and the Nothing are synstatic or concrete, or undiscriminated; and Duism, or the Spirit of Two, represented in the abstract Something and Nothing, the Factors rendered, by Analysis, from that common ground. The Trinism into which we may usually regard the Treism as absorbed is then the Composite Idea, the Hinging and Mechanization of the whole Combination.
714. It is in this joint Domain of Something and Nothing, and then of the limit between them, that Kant finds the three aspects of the Category of Quality. These are, according to him, 1. Negation (Nothing) ; 2. Reality (Something) ; 3. Limitation, or the Ideal Line of Demarcation between the Something and the Nothing. Hegel pushed this Analysis still farther, and found, as he supposed, that the Something and the Nothing, the Positive and Negative Factors of Existence, have no other virtual being than that which is given them by the Limit itself-so that, according to him, Limitation is the Whole of Existence ( t . 111, 114, 115).
715. In any point of view, the Something and the Nothing are a joint, common, ground of indiscrimination, until they are made into Two Opposite Ideal Entities or Aspects, by the interposition of an ideal line of difference between them.
716. To illustrate:-If we throw an inclosing line around a portion of Space, A, Figure 1 in the Diagram below, we have immediately before us three Aspects of the subject to be discriminated. There is, 1 . The Space Excluded at $B$, which wo may call Negative, or cut off-enclosing it vaguely by an outer line-(comp. Lat. neco, to CUT OFF, and nego, to DENY). 2. Space Included, which we may call Positive Space, $(A)$, and
which, as it has usually a Plenum of Matter, is here shaded to indicate its denser or weighticr character; and, 3. The Line or Limit or Limitation ( $C$ ) between the Included and Excluded Space, the Analogues of Something and Nothing, without the intervention of which line, these two portions of Space would fall back into one indiscriminate whole. The two Spaces, Positive and Negative, may still therefore be held in idea, when abstracted from, and contrasted with, the Limit that separates them. Figures 2 and 3 of the Diagram are modified presentations of the same ideas, the curvature of the enclosure being successively straightened, more and more, until the Positive and Negative Portions of Space are equated as Hemispheres or Opposite Side-Halves in contrasted apposition with each other.

$$
\text { Diagram No. } 46 \text {. }
$$

Figure 1.


Figure 2.


Figure 3.

717. Neither Kant nor Hegel connected their abstruse metaphysical discriminations with the elements of Number or Form, as I am now doing; nor with any thing else distinctly existent in the Echosophic or Positive Domain. They had therefore no Canon of Criticism upon their awo thinting, $n o$ gride to the further development of their primary distinctions into the outer world of actuality, either of Thought or of Being, and consequently their speculations, although of the
utmost importance, as helps to higher discovery, were not immediately fruitful of any great Scientific results.
718. It is in the closer Analysis of the Line or Limit between the Something and the Nothing, symbolized by two portions of Space, that we shall discover the origin, in the nature of things, for the Primitive Classification of Numbers into Series, as Cardinal and Ordinal, Integral and Fractional, etc.
719. Observe, in the first instance, that Character and Function are the Opposites of each other. The Line or Cut between the opposite portions of Space is in character, Onethat is to say, it is, in its primary aspect, at least, One Line only. But its office or function is to make the otherwise common or unbroken Unity of Space into Two,-that is to say, into two Portions of Space, then lying at the opposite sides of the Line. Suppose, instead oif the Line, a knife-blade which is a One Thing. This is character, by which is meant that which the Thing $i s$, in respect to its form and entity. But its office or function is to divide or to make into two. This oppositeness of Character and Function, will be technically expressed by the Formula :

## Antithetical Reflection of Character (or Form) and Function.

720. It is by the same principle that the two portions of Space which are, in their abstracted state or character, Two, have for their function to enclose the line between them by applying to the two sides of it, and, as it were, pressing upon them as lips upon a tongue, and so tending functionally to condensation, which is Unity.
721. The two Abstract Sides or Lips of Space, as Positive and Negative,-the Positive Side representing Matter infilling a Space, -and the Negative Side representing a vacant or pure Space, are conjointly the Analogues of the two Sides of the Human Body, which are Positive and Negative respectively. Between them is the Median Line, at which the two Halves of the Body conjoin. The two Abstract Sides, namely
the two portions of Space, or the two Sides of the Body, withdrawing, by the force and drift of the Abstraction, from the Median Line, leave that line itself Negative, Vacant, or Cleft and Tube-like, and furnish the Typical Form, in this fundamental relation, of the Female Body.
722. The Line, on the contrary, as a Positive Entity, is protrudent, insertive, and invasive, and is the suggestive Analogue of the Male Organization overlaying and penetrating the underlying Ground of Being.
723. Both the Male and the Female Organismi have in them both the Principles, Unism and Duism, but in a different order and proportion. Both end also upon a Trinism or Completeness, each in its especial Type of Perfection, as manifested in Function.
724. Feminism is first Unismal in Absolute Origin or Character, as when the Positive and the Negative Space are, by the want as yet oî any line of discrimination between them, equal to One, (1), and this One equal in turn to Zero. Feminism is, sccondly, Duismal, as represented in the abstracted Halves of Space, Positive and Negative, respectively. It is finally and functionally Trinismal, as reconverging and clasping upon the Median Line, and so tending to a Compound and Ultimate Unity.
725. Masculism is, in origin, Duismal, as two sides of a blade, or two opposite aspects, concur in its production. It is then Unismal in resultant character as a One blade. It is again Duismal in Function as penetrative and separative of the edges or lips of the Space or Matter which it divides. Its Treism is its responsive Swell and Unity with the compressive resurgence towards Unity of the correlative Feminism, and their Trinism is the totality of the conjunction of the Two Contending Types of Existence.
726. The Scientific Formula numerically representative of Feminism as the Substancive Ground of Being is

$$
1+2=3
$$

727. The Scientific Formula numerically representative of Masculism as the Limitative and Lawgiving Superincumbent Department of Being is

$$
2+1=3 \text { (t. 525). }
$$

728. Or, otherwise stated, Unism as the Primary, Major, and Dominant Principle, with the addition of Duism as the Secondary, Minor, and Sub-Dominant Principle, furnishes the Feminine Type of Existence ; and
729. Duism as the Primary, Major, and Dominant Principle, with the addition of Unism as the Secondary, Minor, and Sub-Dominant Principle, furnishes the Masculine Type of Existence.
730. These abstruse discriminations are important, and will be made obvious by illustrations when Universology comes to deal with the distribution of the Elements of Mind. c. 1.
731. As the Positive Space $A$, and the Negative Space $B$ (Dia. 46, Fig. 3) press upon the two sides of the Line $C$, the Line is a Divisor between them-Unismal in character, but Duismal in Function-Masculoid-a One Thing making Two of what would be otherwise One. In this mere counteracting pressure there is the idea of Balance, but none of Movement.
732. So, the Inserted Line which separates is met and bounded by the two Edges or Lips which are separated; and these in turn illustrate merely the Duismal aspect of what was originally the One Line separating the two Spaces. Conjointly, the former and the latter case are the Trinism of the Line.
733. Consequently, as the line is neither Unismal nor Duismal exclusively, but as, on the contrary, these two opposing characters co-exist in its constitution, it results that they are

Commentary, t. \%30. 1. More strictly speaking, Feminism is preponderantly $1 ; 0$ with the Sub-dominance of positive numeration, $1 ; 2$; and Masculism is Positive Numeration, $1 ; 2$, etc., with a Sub-dominance of $1 ; 0$. These are abstrusities which it is not essential for the beginner to master, but which, to avoid the criticism of those who may have become more expert in Universological discriminations, are inserted and noticed merely.
related hingeroise to each other, as Counterparts or joint Factors in the total composition of the Line or Limit ; and that they furnish, by thus hinging upon each other, a third aspect more complex than its two Factors, the Trinismal Aspect, namely, Hingism or Cardinism (Lat. cardo, a hivge). All of this complexity is repeated upon the Positive Line singly, and more minutely, as the two Sides of the Body and the Median Line are repeated in the Corpora Cavernosa of the male member and the urethra between them.
734. All of these aspects of the Line as Limit are predominantly Static, or independent of the idea of Movement, or of any order of proceeding in Time. They fill a Space, but without implying Action. In other words, the Line as Limit is riewed sidewise or horizontally, across the line of vision, and not lengthwise, or as perpendicular to the axis of vision. Horizontality, Cardinality, and Limitation are thus primarily and predominantly related to Space and Extension, and not to Protension and Time.
735. Every line viewed sidewise or as a limit, has in it still these three constituent aspects: Unismal, as a one line; Duismal, as two lines-the edges or lips of the two spaces which it separates ;-and Trinismal, as the hinging of the Unismal and the Duismal Aspects upon each other. It is thus that the idea of Metaphysical Limitation, the highest of the Categories of Quality, developes into the Basis of Cardinal ITumeration, the Spirit of the Head Numerals, One, Two, and Three. It is here that we pass logically over, therefore, from Quality to Quantity.
736. But if now, instead of considering the Line sidewise, or as an interposed limit between two Spaces, we follow the Line itself lengthwise in our imagination, a new and different Series of Phenomena develop themselves. The Line is then constituted of a succession of Points, and however minute a portion of it we take under consideration, so long as we leave to it the linear character at all, the portion so selected will have, at the
least, three Prominent and Distinguishable Points ; namely, a Beginning, a Middle, and an End; and in passing from one of them to another, and to the last, we are then constituting and pursuing an Order or Series;-as if we were proceeding onward in Time. It is this inherently necessary Relation of Ideas which lies at the Basis of the Ordival Series of Numeration in the Mathematical Domain. This Ordinal Series of Numeration furnishes again the Law of Careers in the manifold distributions of Nature in the Universe at Large : First, Second, and Third, the Head Numbers of the Ordinal Series repeat the idea, Beginning, Middle, and End. c. 1-8.
737. The Posita-Negative Ground of Being-primarily One,

Commentary, t. \%36. 1. These three terms of every progression or career are, when idealized, the Ground, Means, and End of the Metaphysicians (1), or in a different order, the End, Cause, and Effect of Swedenborg. These are the First Heads, or Prima Capita, of the practical aspect of Speculative Philosophy, and are a Seriated Instance merely of Unism, Duism, and Trinism, as the Cardinal Principles of all speculation. Those relate to Trme, as these relate to Space.
2. Several attempts at the Elaboration of Universal Law have got themselves stranded upon the substitution of the Ordinal and Philosophoid point of view for the more exact Cardinal and Scientoid basis. Each of these efforts has, however, doubtless wrought out some valuable contribution to the general result; and to all true efforts of the kind must be conceded the portion of merit which is their due. From correspondence and through the report of Prof. Clancy, who has had some opportunity for personal explanations, I am disposed to consider what I may denominate the Universological Efforts of Mr. William H. Kimball, of Concord, New Hampshire, to be among the best of their kind, while yet I think them falling precisely under the criticism above stated. The "Germ," "Growth," and "Fruit" of Mr. Kimball repeat the "Ground," "Means," and "End" of the Metaphysicians, or, inversely, the "End," "Cause," and "Effect" of Swedenborg. They are all Ordinal or Motoid, while the true Regulative Basis is Cardinal or Statoid.
3. All of these efforts, so far as I know them, incur also the fatal criticism that they have not been connected, by positive discovery, with the evolution of the Numerical Series, nor with that of Form. Hence they have had no definite guide for their own evolution, no Canon of Criticism upon their own procedure; and, of necessity, they run, therefore, into confusion after the few first
(1) Chalybaüs Speculative Philosophy, p. 38.
and that One correlated with Zero, is then overlaid and fructified by Limitation,-inserted, as it were, between the two lips or hemispheres of that recipient matrix of Existence which is the Type of the Feminine Principle of Being. It is Analogical also with Matter (in Space or with Space) as the Ground or underlying Element of Being in the Triad of Principles, Elements, or Factors, extracted farther back from Fourier (t. 138). The protensive impregnator, or radial insertion called Limit, is then the supervening Male Principle called by him Matiematics. These are Substance and Form, respectively, in the large, metaphysical, sense of those terms. Substance is Feminoid, and Form Masculoid. The Embrace and Copulation of these two is Existence, and the Spermatic Ejaculation, the
simple steps in the application of their Principles, and become, at that point, practically unarailable (c. 1, 2, t. 494).
4. Ordinality is the Middle Track or Highwar of the On-going of Erents, or of Count,-representing successire Items or Erents. Cardinality is the harmonizing or regulating Basis of Direction, to which the Order (or Ordinality) relates, and upon which it rests as a Foundation. It is striking and interesting at this opposite end of the long career of Mental Evolution contained in Historr, to see how the mind of Confucius or of $\mathrm{Fo}-\mathrm{Hi}$, his predecessor, attempted to grapple at once with these decpest problems of Sciento-Philosophy. The following extract will exhibit the profundity of Philosophic insight, on the one hand, and the childish simplicity of that early age, on the other:
5. "Caeng or Middle is the Great Foundation of all Things, and Ho (Harnony) is the All-Perrading Principle of the Universe. Extend Chung and HoMiddle" (Order) "and Harmonr-to the utmost, and Heqren and Earth will be at rest, and all things will be produced and nourished according to their nature."
6. And again: "Not to incline to cither side is called Crasc-Middle; and not to chenge is Iurg. Ciuseg is the path of unirersal Rectitude "-Straichtness, Order. "Iung is the fuxed Law of the Unirerse "-Essential Law, Cardination.
7. Again: "When Knowledge is perfect. it rectifies the motives. Virtuous inclinations lead to exemplary personal conduct."
8. Let us now substitute our own technicalities, and put Ordinality in the place of Chung, Cardinality in the place of Yung, and the composity and adjustment of Ordinality with Cardinalitr in the place of Ho (Harmony) ; and reviewing these extracts in this sense, the closeness of the thinking of the old Chinese Sages will be made strikingly to appear. c. 1, t. 234).
ghostly Essence of Limitation permeating and impregnating Substance, is the Spirit of the Fourieristic Triad of Basic Ideas.
738. Out of the further analysis of these Primordial Elements it is possible to trace the purely rational suggestions and archetypes of all the sexual and procreative forms and functions, and so to arrive at the understanding of their inmost meaning. Such an exposition belongs, however, to the Esoteric Arcana of Universology. It is a lifting of the veil of Isis, which would be totally inappropriate here.
739. The allusion to the Principle of Sex will, in a general sense, be resumed, at various points, in other parts of this work. At this point it is introduced chiefly for the purpose of founding the remark, That the discrimination made by the Metaphysicians, Hegel especially, between Something and Nothing, as the Two First Elements of Being, is a Distribution or Subdivision of the Feminoid Hemisphere of Being cnly; and that a prior and inclusive division of the Totality of Being is that between this Feminine Hemisphere or passive ground, which is Matter, Substance, and Nature, and the supervening Limitation contributed from the Mind, the Counter and Masculoid Hemisphere, which is Mind, Form, and Science. The former or Feminoid Hemisphere is also Absolutoid, the latter or Masculoid Hemisphere is Relatoid. Every Ground, or Fundamentum, has relation to The Absolute, and every Line or Limit has relation to Relation or The Relative.
740. As the Feminoid or Lower and Supporting Hemisphere of Being subdivides into Something and Nothing, so the Masculoid or Superincumbent Hemisphere subdivides into Cardinism and Ordinism, the Limitative Infilling, or Content of Space and Time, respectively, as shown above.
741. Of these two the Cardinismus is the Typical and Leading Domain. Within this Domain, the Unism and Duism furnished by One, (1), and Two, (2), the Head Numbers of
the Domain, take the representative position in the Superior and Ascending Order of Limitation, which in the Lower Order of Substance is held by the factors One (1), and Zero (0), as shown below.

742. Philosophy has heretofore functionated in the region of the distinction between the Something and the Nothing. It is these two Elements or Aspects of Being which give origin in Nature to the Two Principles, called Positive and Negative. These Two Principles are, it is true, very fundamental, in the nature of things, and are not without their important manifestation in the Scientific Domain, as in the case of all Simple Polarizations, - Positive and Negative Electricity, Magnetism, etc.
743. Sciento-Philosophy or Universology functionates, however, mainly, not in the difference between Something and Nothing, of which the Mathematical Analogy is $1 ; 0$, and which, when alone, is barren or unproductive ; but, first, in the difference between Unism and Duism, the Mathematical Ana$\log y$ of which is $1 ; 2$, a generative or augmenting and fructifying Series, opening out into the immense variety of the Higher Numbers on to Infinity ; and then in Copulation of the two.
744. More radically still, the Male and the Female Principles are Hemispheres of a prior Ideal Unity of Being according to the mystical perception of Plato. They there conjointly, or side by side, represent a Duism, and the Ideal Unity itself, as the Total Sphere, represents Unism. These then-this Duism and this Unism-being the Masculoid Set of

Primordial Principles, are thus made to go back of, and to embrace, the very distinction itself between Male and Female, as also that, within the Feminine Domain, between the Positive and the Negative ; as illustrated in the following Table:

TABLE 44.


Absolute Being.-Primitive Unism.
745. The Unism and Duism, (1;2), which are ordinarily contrasted with Positive and Negative, $(\mathbf{1} ; \mathbf{0})$, are here represented more fundamentally and originally in what may be called a Sub-Transcendental sense as' underlying and embracing all other discriminations; for whether we say Unism and Duism, or Positive and Negative, we are in either case halving the Totality of Being, and all Halving or Partness whatever is Duismal ; and this, in turn, is contrasted with the impossible conception or pseudo-idea of the Absolute Being, which has no differentiations, as the Counterparting Unism to this Sub-Transcendental Duism.
746. But Unism and Duism, occur wheresoever they may, are the Masculoid or Scientoid Set of Primordial Principles, as contrasted with Positism and Negatism, the Feminoid or Philosophoid Set. This recurrence to the profounder and inclusive, and, as it were in that case, prior and generative or productive Position and Relation of the Male Set or Principles, from which the Female Set is propagated by Scission or Halving, may be taken as that which is symbolized by the deep sleep which came upon the Man after his solitary creation, and then by the rib taken from his side, -the rib put by a
tigure of speech for a Side, or Hemisphere entire,-from which it is said the Woman was subsequently formed.
747. While the Man is born of Woman in the ordinary and natural process of Generation, there is, it now appears, a more recondite, Logical process, in which this order is reversed. Woman is born of Man or created from him in this Ideal, Spiritual, or Symbolic sense: That the Feminoid or Naturoid Set of Primordial Principles is derived from the Masculoid, Scientoid, or Rationoid Set ; and by echo, that all actual Being, or Nature herself, the Female Idealization of Being, is derived from the back-lying and generative Law or Logos, which is personified as Masculine or Male.
748. In other words, and more simply, Unism and Duism, the Masculoid Set of Primordial Laws, are more original or primitive in the Sub-Transcendental or Recondite Investigation of the Universe, than the Something and the Nothing of the Naturo-Philosophers, which are, from this point of view, both Feminine and derired. The lesson from this is that rigorous Scientific Analysis, (Science being Masculoid), will impregnate and radically vitalize Philosophy, which in the Past has been, as the Woman apart from the Man not truly created or made into Woman while unimpregnated by the male Principle, and so not generative or fruitful of the higher result.
749. It was said above that Cardinism and Ordinism correspond with Unism and Duism. There is, nevertheless, an important difference. Unism and Duism, as Primordial Principles, are the Absolutoid presentation of the Masculine or Limitative Hemisphere of Being. Cardinism and Ordinism are the Relational Outworkings of those Principles into Space and Time, either as Numerical Series abstractly, or as the Serial distribution of Things and Events, concretely. The Absolute is the Pre-eminently Naturo-Spiritual Domain, and it may now be seen what Swedenborg means when he says that the Spirit-W orld is not in Space, nor in Time, but that it transcends them both.
750. The solution of this seeming Paradox is twofold, as follows: First, The Inexpugnability of Prime Elements, in respect to the fact already stated ; namely, that all the Prime Elements of Being, or, in other words, all Primordial Laws, are inexpugnably united and intermingled; so that any separation which we make of them by abstraction, for the purposes of classification and naming, are never anything more than partial and incomplete.
751. The Second part of the Solution is: That the occult Dynamis of Being is, as the rule, and in a sense, the Opposite of the Ostensible Manifestation of Character. More strictly, there are in all things Two Orders, and in respect to either of these Orders, this Inversion occurs. An illustration is found in what has just been said of Generation, as proceeding from the Man and the Woman respectively. In the ordinary and natural sense Man is born of Woman ; yet there is, as we have seen, a Transcendental sense, in which Woman is born or created from Man. One of these is the Natural, and the other the Rational or Logical Order. It is in the Natural Order that Feminism is Absolutoid, and Masculism Relatoid. In the Logical Order, this is reversed, and Man is rationally Absolutoid, and Woman Relatoid; and again, within the Masculoid Domain, the same kind of Subdivision occurs, and herein Unism and Duism, the Sub-transcendental or Fundamental Discriminations, the Ground-work of all the Principles of Being, are rationally Absolutoid, as compared with Cardinism and Ordinism, projections into Space and Time, respectively, of the Schemata of Being, which are Limitoid. This was the point to be elucidated.
752. Rest and Movement, and hence Space and Time, are inexpugnably united with each other. They are distinguishable, but not separable in Thought even. There is no Absolute Rest, having in it no remnant of Motion, and there is no Motion which has not in it a relative Rest.
753. So also there is no Absolute and no Relative, no Posi-
tive and no Negative, no Masculine and no Feminine, no Duismal and no Unismal, in the Absolnte Degree of their Abstraction from each other. They do not exist even, as Entities, but only as Pilases or Aspects of Existence. The process of Abstraction is never completed by any mental analysis. If we could abstract these elements completely, so as to separate them from all connection with their counterparts, they would cease to exist to our apprehension, and become equal to Zero. The true practical Absolute is, therefore, Existence itself, as it is, in the Composity of all Principles, in their Balanced Vibration and harmonious conjunction and co-operation with each other (a. 5, 26, t. 267).
754. The Antithetical Reflexion (t. 382) and Polar Antagonism of Prime Elements (t. 226) becomes thus in one of the branchings of these Principles by itself as formula:
The Antithetical Reflexion and Polar Antagonism of
Inherence and Appearance, or of Entity (or Essentlal Character) and Function (c. 5, t. 136).

This repeats, with an important shade of difference, Tire Antithetical Reflexion of Form and Function (t. 719).
755. By this new formula is meant, that the Inmost or Inherent Truth of a Subject is, as the rule, the Opposite of the Ostensible Truth or the Truth of Appearance ; as, for example, it is the truth of Appearance that the Earth is stationary relatively to the Sun, and the Sun movable and moving relatively to the Earth, while yet the Recondite Truth of the subject, only revealed to the reason on the investigation and comparison of obscure indications contradicting the primitive appearance, and by Mature Reflexion, is precisely the contrary; namely, that the Sun is stationary relatively to the Earth, and the Earth movable and moving relatively to it.
756. This is again the Intrinsic Oppositeness of Noumena and Phenomena; or simply of the Inside and the Outside of Being. Let us apply and illustrate the Principle in so elemen-
tary a matter of Science as the Difference between One and Many;-Singulism and Pluralism, (specifically Duism). c. 1, 2.
757. Singulism and Pluralism are a more vague and general kind of Uniss and Duissir so that what is now to be said applies equally and more specifically to these lạst also. Singulism, apparently and ostensibly, and hence in common repute, relates to Unity or Oneness, and to that only ; but inherently, -or in respect to the origin of the conception, and to what at all times it involves as the foil or background of the more conspicuous aspect of the Conception, and hence of the Conception itself,-it relates, on the contrary, to Many or to Various Ones, from among which the Particular One which fixes the attention (and which is called Single) is segregated or selected. Hence Singuli in Latin means Various or Several ; that is to say, Different or Plural Ones.
758. On the contrary, Pluralism is, in appearance, or ostensibly, Many, or the Spirit of Many; but in essence, the Central Idea of Plurality is the Unition into one Sum of many Units, so that here, inversely, this Unition or Backlying

Commentary, t. \%56. 1. The Absolute "Monism" of Philosophy, (Unism), is the Inexpugnable Inherency of the Unism in the Duism, and of the Duism in the Unism, -as the Essence and Condition Precedent of All Being, or of any Being. Each doctrine taken alone, ("Monism" and "Dualism"), and denying or neglecting the opposite, is an Aspect of the Truth, or a Half-Truth merely.
2. It may then be said that this Compound Doctrine is Duism, or a Dual Doctrine, by reason of this doubleness of aspects or sides. Yea, verily, but yet no more a Duality than a Monism, (Gr. monos, stingle), inasmuch as the two (or many) Aspects belong to the one Substance-which, nevertheless, is no substance, except as through these Aspects, which substance is, therefore, itself an Aspect mercly of the unresolvable Compound Truth of All Being. The Absolute Substance is not, therefore, an Entity separable from its Phenomena and Conditions; but is itself an Aspect of the Composity of Being, and is as dependent upon its Properties and Conditions as are the Properties and Conditions dependent upon it. The mistake of Philosophy is the putting of Aspects into the category of Entities, that is to say, of separate or scparable realities (t. 753).

Unity is the Soul of Plurality; and hence of Duality, the Simplest form of Plurality. Here, again, therefore, is the same Antithesis between the Inherence and the Appearance. So, also, in general, Truth is not Simple, but Complex or Compound ; in fact, Bi-compound, and so on, to higher degrees of Complexity.
759. Taking, then, the Inherence, (the Intrinsic or Recondite Truth), as the Spirit or Soul of the Idea, and the Appearance, (the Mass or Body of the Phenomena), as its Material Body, the two following statements will be readily apprehended: 1. That Material or Corporeal Unity, as of the Single Unit or Object, implies, and rests, as its ground, upon a Spiritual Variety or Difference; and that the Prime Instance of this Spiritual Variety is Relational Separation from other Units or Objects; and thence, derived, an achieved, or completed Individuality of each Unit, Atom, Monad, Thing, World, or Individual; so that All True Corporate Organization rests upon this Basis of an Ultimated or Achiered Individuality of the Parts or Members; and, 2. That, contrariwise, the Corporate Variety-as of the Several Units in the Sum, of the Several Objects in a Group, or of the infinitely numerous Individuals in Society-implies, and rests, as its Ground, upon a True Spiritual Unity or Coordination of these Parts or Members of the Sum, of the Group, or of Socicty itself, as a Whole, or of any smaller Consociation, as the Family, the Sect, or the Nation.
760. The Spiritual Unity of the Parts or Minor Wholes in the Collective Unit or Major Whole, as of the Limbs or Members of the Body in the Main Trunk, or of the Members of Society in the Body of Society, in Subordination to the Social Pivot or Head, is, therefore, synonymous with Convergent Individuality ; and, contrariwise, the Constitution of the Individual Parts or Members into the most perfect Individual Separateness compatible with the possibility of their remaining Parts or Members, in true subordination to the Head, and in
true service of the Main Body or Trunk, is the Legitimate Operation of Divergent Individuality in Society, ( $\mathbf{t}$. 47). "All things," says Swedenborg, mystically, "are most perfect in proportion as they are most Distinctly One"-that is to say, in proportion as the Parts are most Completely Differentiated according to Function, and yet most harmoniously and completely adjusted to each other, and to their Pivot or Centre of Organization, in the Major Wholeness of the Total Organismus. This is also the "Infinite Variety in Unity" of Fourier, as the Type or Norm of the Constitution of all Things. In Schiller's Letters, the Antithetical Relation of the State and the Individual is ably discussed in this sense. The Individuality of Warren means indifferently or confusedly either or both of these Varieties of the Principle, and is the Scientific Exponent of all Freedom. It is a magnificent Generalization, but it lacks definiteness in Practical Application, or as a working instrument of Politico-Ethical Action (above and beyond its mere basic character), until the distinctions, which these Antithetical Designations (Convergent and Divergent) introduce, are superadded and noted.
761. So it results that while the Individual Object or Person, the Individual Member of Society, for instance, is a Type of Singleness, of Unity, and of Unism, yet that the Numerousness of Individualities within the Unity of Society is the Dutsmus of Society as opposed to, or contrasted with, the Ideal and Spiritual Unity of Society, as the Unismus thereof. The Resulting Composity of these two is then the Trinismus. (This applies to Organized Society).
762. It is the Individual (Member or Part) which alone manifests a Material Body. Society appears only in the Persons of its Members. The Spiritual Unity is unseen, because it is Spiritual; in the sense that it is Sentimental and Rational or Ideal ; although it may be represented by a Material Pivot, as in the person of the Monarch, the Priest, the Military Chief, or any other Leader of Organization and Movement.

The Contrasted Oppositeness in question reappears, therefore, as:
The Antithetical Reflexion of Spirit and Matter.
763. But Spirit and Matter are Abstractions until they are embodied in their two Worlds, respectively. The same Oppositeness of Presentation then recurs in a concrete way; it is expressed in the Formula:
The Antithetical Reflexion of the Spirit-World and tie World of Matter.
764. But what has been shown and inferred is still not the whole of the Complexity in this simplest of Domains, the Relation between Singulism and Pluralism, or between One and Two. Unity or Oneness is everywhere, from the Primitive Universological Point of viero, the Badge of Nature, and Duality or Twoness is equally the Badge of Science; while yet, however, Nature coincides with Body, and so with Bodies or Individualized Real Objects, and is apparently, therefore, Plural and Material ; and while Science coincides with the Unity of Law underlying the Manifestation, and is therefore ostensibly Singuloid or Unismal, and also Spiritual or Invisible. These seem to be contradictory appreciations of the Subject, to those previously stated, and so in a sense they are ; but the Solution is at hand, and is this: Nature does indeed consist of Numerous and Real Bodies and Phenomena of Bodies, and is, in that sense, Multifarious or Pluraloid; but these Bodies and Phenomena are, as first presented, confused or indiscriminutely poured together, (Lat. con, wirir, and fundo, to Pour), and so made into One Undiscriminate Mass (Unismal). It is incipient Science which then comes to the rescue, and Differentiates, Separates, or Dualizes and Discriminates, these Confused Objects and Phenomena. The first stage of Science is this merely distinct Observation which withdraws the Individual Objects and Phenomena from their Undistinguished Primitive Unity. So, on the contrary, Sci-
ence being inherently the Unity of Law is, nevertheless, functionally, and so in a Secondary Appearance, Pluraloid. From the Higher or Transcendental Universological Point of View, -that of Secondary Appearance,-it is true, then, that Nature is Duismal, and Science is Unismal ; but ordinarily we speak from the lower Understanding of the Subject.
765. So it is in Primary Appearance that Singulism presents itself as One only; in Secondary Appearance it is Plural (Singuli) ; and it is in Primary Appearance that Pluralism presents itself as Plural or Diverse, while in Secondary Appearance it is, from the Spiritual Unity of the Sum, Collective or Singuloid. There is then here a Compound Terminal Conversion into Opposites, (t. 84), and Convertible IdenTity (t. 89). Secondary Appearance coincides with Inherence. It is the reverse of the Picture, still, however, observationally considered. Appearance, of all Grades, has still to be contrasted with Radical Inherence which is The Law of Being revealed by Ultimate Analysis; that which is not Appearance at all, except to the Rational Faculty in Man. The Ostensible Multifariousness of Nature is a Secondary Appearance, contrasted with the Primitive Confused Unity of Nature, and repeats, or echoes to, Science; but it is still not Science in the Higher or Transcendental Sense of the Term, until the Underlying and Inherent Law of the Phenomena is discovered and demonstrated to the Reason. This last is the Basis of the Higher Spiritual Unity, the complete Consensus Animorum.
766. It is because Primitive Appearance is related to $N a-$ tural Unity, and Law, or the Secondary Aspect of Inherence, to Spiritual Unity; and because, by Loyalty to the Dominant of the Domain, (t. 523), Primism Leads or Governs in the Naturismus, and Secondism in the Scientismus, that Intuition, which cognizes Primary Natural Appearance, is in a Kind of Unity with Transcendental Science, or the last word of Scientific discorery, despite their Natural Antithesis. It is
again this harmony which opens the way to the reconciliation of all catremes.
767. A word further is needed of explanation in regard to the two Fundamental Varieties of Inherence. Primary Inherence is the Unity of Individuals in the Group; and in Absolute Priority, it is the Union of the Parts and Properties, (treated herein as Subordinate Units), around the Centering Principle or Soul, in the Constitution of the Single Unit, Object, or Individual. The Pivot of the Group, representing this Inherence, is the more Immediate and Ostensible Governor. It is allied with Comte's idea of the Temporal Government. It is the Over-Soul of the Transcendental Naturalist. In a Universal Sense it is the God of Arbitrismal Theology (t. 48, 198).
768. Secondary Inherence is the Unition, by Identity of Lavo, of Groups into Series and Systems of Groups; or of Special Domains into Domains-of-Comparison-between-Domains, (Transcendental). It is the Abstract Law here which functionates predominantly, instead of the Personal or Objectlike Pivot, which last may still be interposed, however, by Subdominance or in a Secondary Sense. The Law first, and then the Subdominant Pivot under the Law, (Personal or Ob-ject-like), is then the less obvious, but it may be the more effective Spiritual Governor. This is allied with Comte's idea of a Spiritual Government for Mankind, based on Science. It is that Inherent Universality of Law which is the Key-Note of Science, and of Transcendental Philosophy. Theologically, it is the Lorgos, or the God-Conception of Pure Rationalism.
769. The Tertiary Inherence is the Composity and Reconciliation of the two preceding varieties. It is the Integration of the Temporalities and the Spiritualities of Being and of Society by virtue of a higher understanding of the nature of their Relationship. It is the Pantarchal Régime in Government; the God-Conception of a New Catholicity in Theology and Religion; the Reconciliative Harmony, in fine, in all things, of Opposite Extremes.

## CHAPTER VI.

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770. We resume in the present Chapter the consideration of Form ; ascending merely to higher and more concrete Elaborations of the Symbolism of the Subject. The Symbolism of Form, intuitionally prevised, has been the special Depository of the Institution of Free Masonry. Intellectually discorered, it is the Science of Universal Morphology, and the Central Domain of Scientific Anctogy (t. 905).
771. Number, as representative of Entity or Thing, is Naturoid or Philosophoid. Form, which furnishes the Rule and
the Square, is Scientoid or Echosophoid. As compared with each other, Number, as representative of Substance, is Feminoid, and Form is Masculoid.
772. To gain a farther entrance into this new Domain of Thought, let us recur to the question of Sex. This great discrimination really permeates all Being. It is recognized by the Scientific World, in a glimmering and indeterminate manner, lower down than the Vegetable ; quite distinctly in the Vegetable Kingdom ; but most clearly among Animals; and in the full richness of its Material and Spiritual Significance, only as between Man and Woman.
773. Every animal, or, at most, with the minimum of exception, originates from an Egg. "Omne vivum ex ovo" (Every Living Thing comes from an Egg). The Egg, in the midst of an infinite variety, has yet one general characteristic or typical shape-that which is indicated by the word Oval (Lat. ovum, plur. ova, an EGG, EGGS). The egg of the turtle is virtually round or globose ; that of some birds but little removed from that type; that of other birds more elongated or distinctly Oval. The Egg of the common domestic hen may be taken as the standard shape of an Egg, as that with which man is most familiar, and to which his thoughts of an Egg ordinarily recur.
774. The Egg everywhere originates with, and is characteristic of, the Female Animal. It repeats the Seed of the Vegetable and the Atom of the Mineral. It is the Epitome of the Female, and of Substance or Matter. It is therefore Naturoid and Philosophoid. It is the Storehouse of the Materials of all Future Constructions unimpregnated (at first) by the Spiritual or Formative influence of the Male Principlethat which is subsequently to introduce specific Limitations or Featuring among these primitive Materials (Practical Creation). The Contents of the Egg are the Posita-Negative Mass (receptive of the Creative Act). The Yolk is the Positive, and the White the Negative Content. In the Human Female the Eggs are very small. They are called Ova, and
the Sacs or Organs that contain them, are called Ocarics (c. 1-44, t. 136; t. 553, 000).
775. It is then, and for these reasons, the Outline and Midline of the Typical Egg, that of the Hen, with which we are now concerned, as illustrative in this more Concrete Department of Form of the most important Principles, the Prima Capita or First Heads of Being. The Domain itself is Feminoid. Form which is a Masculoid Element is herein present, therefore, only in a Subdominant or Obscure way, which it requires the keenest observation rightly to analyze into its component elements. The following Diagram exhibits the Egg in its Ideal Mathematical Constitution in respect to its Outline, and to the Interior General Plan of its Construction or General Form, a little more fully (Dia. No. 28, t. 596) :

776. This Diagram then dissolves by Morphic Analysis into the Three Elementary Shapes or Head Forms, exhibited in the following Diagram :

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Diagram No.48.
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1. General Outlinc.
Naturoid.

2. Exact Segmentation.

Scientoid.

3. Plasmal and Complete Form. Artoid.

777. Of the first of these Varieties of (Concrete) Elementary Form-the General Outline allied with Nature-there is an important Subdivision, as shown below. The Roundness is disengaged from the Moulding or Art-Line of Compromise which encompasses the Egg-Figure (t. 775).

Diagram No. 49.

1. Planetary.

2. Orbital.

3. The Globe, freed, as in the last preceding Diagram, from every appendage,-but there represented superficially, or in Outline, by a Circle,-and the Cube, taken from the Interior of the preceding Diagram, (No. 48), are the two Grand Symbolic Head-Types of all Elaborate Form :-the Former Unismal and Naturoid; the Latter Duismal and Scientoid. They are brought prominently together for comparative inspection in the following Diagram :

$$
\text { Diagram No. } 50
$$

Type of Unity-Unismal; Naturoid Symbol of Elaborated Nature.


Type of Exactitude—Duismal ; Scientoid.
Symbol of Elaborated Science.

779. The Generation of the Cube from the Globe, and the subsequent interblending of these Two Forms in the Form of the Egg, are rationally accounted for, as follows :

Let a Ciobe be cut through the Centre by three Planes at right angles with each other. This is the Simplest or most Elementary Complete Segmentation of the Globe. This adjustment of the planes is demanded by the operation of a Principle heretofore introduced and formulized; namely, Tendency to Equation (t. 535).
780. The resulting figures from this Segmentation are Eight Incipient Cubes, each having a Solid Angle at the Centre of the Globe.
781. By the Incipiency of these Cubes is meant that, in consequence of the rounduess of the Surface of the Globe, the radical Straightness, Squareness, and Equality, which are impressed upon the Inner Lines and Surfaces of the Eight Segments are not actually carried out on the obverse side of the Segments, which, with each of them, is a Portion of the Surface of the Globe. The completion of each Cube may be effected ideally, or by inference, as indicated by the dotted lines in the Diagram below ; and the doing of this is a natural tendency called up and justified by the principle above men-tioned,-that of Tendency to Equation.
782. Two only of the dividing Planes can be conveniently indicated on paper by Diametrical Lines or Axes (Diamitrits). The Third, lying on, or parallel to, the level face of the sheet or page, must be imagined.
783. Of the Eight Cubes thus begotten of this Elementary Segmentation of the Globe-Figure, any one may be selected and made typical, to enter by blending-with-the-primitive-globe-figure, into the composition of the Ovoid; while, in compensation, and for other uses too recondite for our present purpose, the Seven are chosen, and the one is rejected.
784. It is by then casting a Modulating Line of Compromise or Genercl Conformity, (Plastic, Artistic), around both
the Globe and the Selected and Included Cube, that the Trinismal Interblending of the two in a higher form is exhibited, and the Egg-Form revealed as the type of that Trinism. The Principle of Artistic Modification ( $t$. 515) is involved in these changes. With the preceding explanations the following Diagram, pre-eminent among the illustrative diagrams of Universology, will be readily intelligible :

785. In accordance with the indications of Analogy now established, it will be made gradually to appear that the whole Domain of Philosophy is subdivided into Departments which correspond with, and are exactly symbolized by, the different aspects of the form of the Egg. The Egg being the Embryonism or First-Principle-Domain within the Feminismus; Feminism being Naturism, and Naturism, Philosophism. In other words, the forms so embodied in the Egg are the Universals of Elaborated Form ; and Philosophy deals with First Principles of the kind, which are Unirersals in a sense analogous with the Elaborate; The Absolute, the Domain par excellence of Philosophy, being an Abstract of Real Being, as the Relative,
the Domain of Echosophy, is so of Ideal Relations. More directly, however, the Varieties of Egg-Form relate to the Real Universe as such, and to what may be called the Natural History and Natural Science of the Universe at large.
786. The Principle by which the sharp differences of Primitive Plans and Discriminations are compromised and blended and toned down, in the ultimate fimish and perfection of things, -as, for example, by the enclosing Outline of the Egg, uniting and blending the Globe with the Cube,-is, as just stated, (t. 784), Artistic Modification.
787. The reader is already partially familiarized with the assumption of a Globe, Ball, or Planetary Body, as the Type of the Natural Universe in Space. This idea must now be expanded, and somewhat more fully justified, as well as the related idea of the Orbital Track, or Tail, or Trail, of the Planet, as the Analogue of the Procedure of the Universe of Affairs in Trme, or as the Order of Providence, or the OnGoing of Events (Dia. No. 45, t. 670).
788. The Universe conceived of as stationary, or in a state of rest, fills a given Space, which Given Space has assigned to it, by a necessary Law of Thought, a certain definite Form,-that of a Sphere or Globe. Conceived as undergoing successive changes of State, this Grand Universal Globe of Space seems, at each new Period or Instant of Time, to occupy a different Position (within, as it were, notwithstanding this Paradox, a still larger Extension of Space); to have progressed, in other words, along a pathway of development; and to have taken successive steps also through another species of Negative Medium, which we call Duration or Time. Hence it is that Space corresponds with Station or Rest, and Time with Motion or Progression (Table 10, t. 144, t. 220, 672).
789. Let any one attempt to think of the Universe at Large as to its Material Extension in Space, and if he posit his ozon mind centrally, as an abstract Potency of thinting with equal facility in all direction, the Universe will neces-
sarily assume in his thought the Form of a Globe, of apparently infinite dimensions; for since his imagination will go outward in every direction, and since there is nothing to prompt it to go farther in any one direction than in all other directions, it follows that, at whatsoever distance the Imagination may rest, and give over the hopeless effort to grasp the Infinite of Extension, it will rest at the same Distance outward, upon each of the diverging Radit; hence, the resulting figure can be nothing else but an exact Globe.
790. But concretely, the Observer, while positioned at the Centre of this Globe-like Universe, is also positioned precisely at the inner Angle of each of the Eight Cubes into which the three Elementary Planes of Existence segmentize this Huge Globe (t. 780) ; and as the actual powers of the Observer are so limited as to compel him to think in some single direction outward, in preponderance over other directions, he most naturally looks or thinks diagonally through some one of these Cubes, and the resulting figure is then, by Artistic Modification, the Egg Form, interblending the Globose Figure rendered by the abstract Conception previously stated. God only is symbolized by a single All-Seeing Eye, and is the only Being with whom, therefore, the Globe or Circle is the Typical Form of Perfection. The following Diagram will add to, and complete, the illustration :

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Diagram No. 5 2.
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791. It is thus that the Conception of the Static Universe in Space, -and, in miniature, and as typical of it, that of the single Planet with its Centered Inhabitant and Observer,-as a Ground of Being, is Typical of the combination of the HeadForms, (the Globe and the Cube in the Egg); and typical, by another Analogy, of the Head-Principles of all Being. These, by re-inversion from the Logical to the Natural Order, would be more properly denominated the Ground-Forms and GroundPrinciples of Things. In German, Grund-sütze, Ground Sets or Settings, or Positings, is the word which signifies Principles.
792. The Student, beginning to think upon so vast a subject as the Science of the Universe, cannot but be struck by the circumstance of an exact conformity in shape or figure between the great planetary bodies-Suns, Planets, and Stars, each of which, as woll as the Universe at Large, is called a World-and the ideal conception of the shape or figure of the whole Universe or World of Matter and Space as it rests, by a Necessary Law of Thought, in his ouon imagination.
793. This conformity of shape between a Pure Abstract Ideal, -a Metaphysical Conception of the Universe imposed on the Mind by the Logic of its own Operations, -and that of a Real Concrete Thing, also a limited World of Matter, results from, and illustrates, a Fundamental Principle of Universology, which may now be formulized in these words:

The Trpical Reproduction of the Subjective in the Objective World.
794. By this is meant that Nature, or the Real World, is, so to speak, built up on the plan of repeating in the real form,-that is to say, in some Positive Creation, some Actual Thing, or some Department of the Concrete Unirerse,each primitive Metaphysical Element, and each Operation of the Necessary Laws of Thought, so that exery Object in Nature becomes the Reflect and Type, or Counterpart, of some Phenomenon of Conception in the Mind.
795. It is in accordance with this Principle, -The Typical Reproduction of the Subjective in the Objective World, -that the Planet, or other Celestial Body, repeats, in its conformation, the Ideal of the Entire Universe of Matter and Space; and from the operation of this Law we may infer inversely, that the Total, Real Universe of Matter and Space-if limits be assigned to it at all-is Globular in form. It is in accordance with the same principle, and is another illustration of its operation, that Matter repeats, in a real concrete way, the Prime Metaphysical Element, Something; and that Space repeats the Antipodal Element, Nothing.
796. From this we may also authorize the expectation, which will be verified as we proceed, that all the other Prime Elements of Being :-Motion and Station, Matter and Mind, Substance and Limitation, and the Combinations of these, and all their relations as Aspects of Being-will have special departments of the Real or Concrete Universe, corresponding with, or analogous with, themselves.
797. This Echo or Repetitive Relation between the Abstract and the Concrete, between the Metaphysical and the Physical, between Mind and Mattcr, is what renders a Science of the Universe possible. It lies at the foundation of the Unity of System in Nature or the Universe, and of that Grand Scheme of Correspondences or Universal Analogy in all Spheres of Being, which has, in all time, been dreamed of, and assumed, by the Poets, and suspected by all the great Thinkers, but which is now for the first time discovered as Science, and being specifically demonstrated. "The congruities of Material Forms to the Laws of the Soul are divine allure-ments,"(-Swinton) ; but hitherto these congruities have been intuited, merely, and never scientifically proven to exist.
798. But while the Globe, the Cube, and the Solid Oroid, with a definite Solidity given them by their Tri-Dimensionality, are the First Heads of Form in the Concrete Aspect of the Subject in which we are now considering them, there remain
some other Discriminations, of a purely Abstract Order, which should still precede and take rank above them; Discriminations which lie, indeed, at the Opposite or Occult End of the long line of Morphic Development.
799. To these New Abstract Discriminations I shall, for a moment, direct the thoughts of the reader. From them we shall then return gradually to those Concrete or Elaborate Views of Form with which we have been dealing hitherto in the present Chapter.
800. In this regressive search after the most general $A b$ stract Discriminations of Form, let us attend more carefully to that one among them which repeats the Something and the Nothing; or the $\mathbf{1}=$ All and Zero (0); or Matter as the Content of Space, and Space as the Continent of Matter,-the Negative or Vacual Hemisphere or Factor of Substance.
801. This Discrimination we find, 1. In that Variety of Form which is infilled with a Plenum or Content;-Form as the Outline of some Actual Substance;-for the Analogue of the Sometiring; and, 2. Pure Form, or that which is vacant of any actual content,-an Outline made in Pure Space by the imagination, -as the Analogue of the Nothing (and of its Analogues, among which is Space itself as the Negative Counterpart of Positive Substance). (t.550, 573, 574).

S02. But it is very important here to observe that by a Decussation or Terminal Conversion into Opposites, like the changing of position by the partners in a dance,-Pure Form, which is thus repetitively the Analogue of the Substancire Nothing, (Non-Substance), and which is itself, from the Substancive point of viero, a mere Nothivg, is, nevertheless, the Morphic Something; that is to say, it is the Positive Department, Factor, Element, or Principle, of the Domain of Form in the Pure Abstractness of that term ; and, on the contrary, Plenal Form-that which conforms to an actual Content, as Planet-form, Tree-form, Human-form, etc., and which is therefore governed in its features by this actuality-
is the Negative Department or Principle of Form properly so called. This becomes obvious if we reflect that Pure or Scientic Form is predominantly Geometrical Form ; and that Geometrical Form is that which is governing in the Total Morphic Domain ; and that consequently Plenal, which is at the same time Natural Form, is subordinate, less important, or Negatoid, in this Domain. c. I. In other words; There are Two Pesitives and Two Negatives in all the Universal and Particular Distributions of Being. This Fundamental Discrimination is then Fouriold, not Twofold merely; BiCompound, and not merely Compound ; again, these two Sets of terms, with what they signify, are Antithetically related to each other; whatsoever is Naturo-Positive is ScientoNegative, and vice versa. This Complexity is strikingly illustrated in the relationship between Galvanic Electricity and Chemistry. The Electro-Positive Pole of the Battery is allied with the Electro-Negative Chemical Substance, and the Electro-Negative Pole with the Electro-Positive Substance. The Electrical Polarity is Scientic or Masculoid ; and Material Substance, the Domain or Subject-Matter of Chemistry, is Naturic or Feminord. It is obvious, therefore, how futile and deceptive is the mere distinction into Positive and Negative, for any purpose

Commentary, t. 80\%. 1. Geometrical Form, (t. 600), here assumed by Science to represent all Pure Form, is Scientic or Scientoid Form, and from its exactitude is first the actual, and then the symbolic Measurer of all other Kinds of Form. Plenal Form is Naturic or Naturoid, and is that which is observed, as actually existent in Nature, by the Artist. Merely to copy this Naturoid Form from Nature is, however, the very lowest style of Art. It is when Geometrical Form (as in Architectural and Mechanical Drawing) or the Spirit of that Form, as the ideal lines of beauty seen in the imagination of the real artist, and expressed in free hand drawing, are posited as basis beneath the actual forms seen in Nature, that we arise to the Artoid Expression of Form. When the drawing is actually Geometrical, it is, from the artistic point of view, lower in rank. On the contrary, from the scientific point of view, it is then highest in rank, as more truly adjusted and adjusting.
of exhaustive Philosophical reasoning, until it first be known whether we are speaking from the Natural, (that is the Philosophical), Standpoint ; or, inversely, and reflectively, from the Standpoint of Objective Science.
903. But we are not at the end, yet, of this Complexity. More closely considered, we perceive that both the Electricity and the Chemistry are within the Domain of Matter, as contrasted with the Domain of Mind ; and it is Matter, or the Materiismus, (with its Subdominance of Mind as the Immanent Non-Explicated Reason lying hid in the Nature of Things), which is the True Feminismus, in the Total Universe of Being; whice it is Mind explicitly Evolved into SelfConsciousness and Virile Power, (with its Subdominance of Etherial and Material Envelopment), which is the True Masculismus in the Same Total Universe. In other words, The W orld is Feminine, and Man is Masculine, in the Grand Cosmical Marriage of Being (t. 1). The World, as Universal Cosmos, contrasted with Man, (the Entire Race), is then repeated in a finer Involution of Analogy, ( $\mathbf{t}$. 101), wholly within the Human Race, by "The Masses of Mankind," "the Common Herd," (Materialistic), as against "the Men of Mind," "the Elite of Humanity," the True Governors of the Race, (Idealistic, Transcendental). The Mass of the People, or in short, the People, is, in other words, Feminoid, and the Government Masculoid. The Government, then, in turn, pivots upon the Single Individual who is the Head of it, as Monarch, President, or Chief ; and it is He who is symbolically Masculine, or the Lord, as contrasted with the Whole Mass of his Subjects, (Lat. sub, under, and jcctus, tiriown). Such a Personal Pivot of the Whole Rational Universe with his and its Footstool in the Material Cosmos, and whether as a Real or as a purely Ideal Being, is God or "Tire Lord," of Theology. The Elite of Humanity in the same Theological sense, but now in the Subject-relation to the Lord, is the Church. It is in accordance with this Symbolism that Christ,
as God, or the Lord, is impersonated, in The Revelations, as a Bridegroom, and The Church as His Bride. Such is the Intuitional Prevision of Underlying Scientific Verities destined, from the first, to be finally revealed to the Understanding. c. 1.
804. It results from what precedes that the Trace of Masculism and Feminism above discovered and pointed out, (t. 802), as between Electricity and Chemistry proper, or the Mass of material Substance operated upon, pertains to a Subdivisional Aspect of the Feminine Half of the Total Creation ; that is to say, to Matter exclusively, (or in Preponderance). We have before us, in this connection, 1. Matter, (The Chemistry) ; and, 2. The Affections of Matter, (The Electricity). Gove has employed this term, "The Affections of Matter," to denote Light, Heat. Electricity, Magnetism, and Motion,--the Various Correlated Manifestations of Force. Matter (the Chemistry) is then essentially or inherently Feminoid, and the Affections of Matter (here as Galvanic Electricity) are essentially or inherently Masculoid ; both precisely as Feminine and Masculine Traits are found in the Woman, (or the Man), individually. But by a new Complexity, a legitimate operation of the Principle of The Antithetical Reflexion of Inherence and Appearance, and of Form and Function (t. 754); and by Loyalty to the Dominant of the Domain (t. 523), Matter functionates in this Material Domain, (The Materiismus), as Masculoid, that is to say, as of governing prominence and importance, (as, among Amazons, Feminism is Supreme) ; and the Affections of Matter

Commentrery, t. 803. 1. By the Principles of Inexpugnability, (t. 226), Mere Preponderance, (t. 526), and Overlapping, (t. 527), it may happen that the Pivotal Personage of Society should be a Woman, as in the case of Maria Theresa of Austria, Catherine of Russia, Elizabeth of England, and other great Women who have reversed the ordinary drift of History in this respect. Such exceptions will become more common with the higher general development of the Sex, without disturbance to the Fundamental Principles of the Dominant Law of Evolution as expounded in the Text.
functionate as Feminoid, that is to say, as Subordinate and Accessory; while nevertheless it is the Affections of Matter, Heat, Light, Electricity, etc., which Coincide with Mind, the true Masculism of the Universe, (c. 12, 20, 24, t. 503).
805. It has appeared in the beginning of this discussion ( $t$. 802) that the Echoes of Something and Nothing, or of Positive and Negative Being and Principle, are Fourfold, and not merely Twofold, while still we were confining ourselves wholly within the Domain of Matter. It will now be readily apprehended that even this enlarged Number is again doubled, when we extend our field of Observation, and include the Domain of Mind. This happens necessarily, by virtue of the Echo of Analogy universally, and especially as between Matter and Mind. There is that within the Mind rotich corresponds to Matter, and that which corresponds to the Affections of Matter ; and within each of these a Positive and a Negatire Side, the two Sets of Posita-Negatism tien Antithetically arranged witi respect to each otiter; as in the case of Electricity and Chemistry. Precisely how all this happens it would require too much space to expound at this point. The Subject will recur elsewhere in connection with the Science of Mind.
806. There remains only one point further to be noticed here upon this Subject. It is this: We have now assembled under the focus of our critical attention, a full Octave, ( 8 ), of Fundamental Aspects of Being derived from, and related to, the Primitive Philosophoid Discrimination into Positive and Negative, they derived, in turn, from the Quasi-Entities, Something and Nothing. By a Continuous Involution of Analogies, this Octare of Discriminations is augmented to an Octare of Octares, as on the Keyboard of the Piano. By Intercallation of Finer Analogues,-Analogues of the Semi-tones, -the Eight Diatonic Notes are carricd up numerically to the Twelve Chromatic and the Twenty-Four Enharmonic Notes; so that the Keyboard, or Mechanizing Platform of Music, echoes
precisely to the Mechanizing Keyboard.or Platform of all Concrete Existence. This perception vaguely entertained was the basis of Fourier's profound intuition, that in the Distribution of the Harmonies of Music is the Key to the exact Understanding of All Harmonies whatsoever in all Spheres ; reaching down to the Primitive Distributions of Being itself, and thence, re-ascending, in traceable Order, and Seriated Succession, through every Domain. The field of Enquiry so opened is immense ; ample to enlist the labors of Millions of Thinkers in the Coming Ages. A glimpse of the Method and the Possibility must suffice for the present. Time in Music, with its Divisions of the Minim, into Semi-Breves, Crotchets, Quavers, etc., is the Scientoid Hemisphere of Harmony, as Tune is the Naturoid or Philosophoid. It has its basis in One, Two, (Unism and Duism), as the Tune-Department of Harmony has its basis in One, Zero, (or Something and Nothing, or Sound and Silence). From the Philosophoid point of view the Whole Universe is wrought out from the Primitive Something and Nothing, ( $1=$ All and Zero) ; from the Scientic point of view the Whole Universe is wrought out from the Significant Head-Numbers One and Two ; and finally, from the Sciento-Philosophic point of view, the One = All of the First Couple of terms is identified or found to coincide with the One of the Second Couple, and the Zero (0) of the First Couple (as denying, and hence Exclusive and Separative), is identified or found to coincide with the Two of the Second Couple; and thus, finally, Philosophy and Science are brought under the operation of the same Law.
807. By Time, in respect to Music, is meant Rhythm or the Rhythmical Department of Music, a Subdivision of the Musical Domain, as the Whole Musical Domain is itself Subdivisional of Speech or Utterance. Music is the Strain or Unified Extension of Utterance, like a Skull ultimating in the Nose with its Sonorous Twang, and is, thence, as a whole, the Analogue of Space, while Oral Speech or Articulation,
(Little-Jointing, Lat. Articulus, a little jornt), Seriated Utterance, like a Vertebral Column, is the Analogue of Trme, Music is therefore the Fixed Strain, and hence the Statism of Speech, related to the Head; and Oral Speech the Flux or F'luency of Speech, (Successivity), related to the Trunk-(by Analogy). This is, however, Repetitive Analogy, or Coincidence. The Tendential Analogy or Correlation is just the Opposite; Oral Speech being the Adaptation to the Expression of the Thoughts of the Understanding which relate analogically to the Head, and Music being the Adaptation to the Expression of the Voluptuousness of Feeling which relates to the Body or Trunk (t. 31, c. 12, t. 503). In speaking, therefore, above of Musical Time (Rhythm) as the Analogue of The ( $\mathbf{t} .807$ ) there is the same inaccuracy as there is with Swedenborg and Tulk when they make Time to correspond with Wisdom and Thought, and Space with Feeling, (c. 12-38, t. 503). That idea is true, only wohen we are speaking of the Space-litie Subdivision of Total Being as if it voere. the Whole, and Subdividing it into its Secondary Analogues of Thought and Feeling, which contradict the larger and all-embracing Distribution of the Subject. In accordance with this larger Distribution, it is the Whole Musical Domain which answers tendentially to Love or Feeling, and repetitively to Space, and the Whole of the Oral Speech-Domain which answers tendentially to Wisdom, or Thought, while yet repetitively to Trime. Oral Speech is the Back-bone of Utterance or Language upholding the Head. Music is the Faced and Featured Head of the same Domain resting on Oral Speech as its Basis and Support. (1).
808. This curious but exceedingly significant change of relative character-in passing from the Subdivisions of Form viewed from the Standpoint of Substance, to the Subdivisions of Form viewed from its own proper Standpoint, as Abstract;

[^78]is accounted for as follows: Form is, in itself, a Pure, Abstract, Rational Conception, and is, therefore,-from the Substancive, which is the Naturo-Positive Point of view,-itself a Pure Nothing. For example, a Point, the First Element of Form, is defined as being without length, breadth, or thickness; and the Line, the Second Element of Form, as being without breadth or thickness. Now such Entities are,-to the sensuous perception, or to that faculty of the Mind which observes externally, -an absolute Nothingness. On the other hand, to the Pure Reason and Understanding,-Elements of Mind which are analogous with Form, or which repeat Form, with its Points and Lines and other phases of Limitation, within the Mind, -these purely Abstract Entities-whether conceived as existing in Matter or in Mind-are the only true Something, the Whole of all Positive, Self-Existent, and Absolute Being, the Law- or Logos-Element whence the common and unreal appearances of 'Substance proceed (c. 34, t. 503).
809. From the Rational or Logical Point of view, therefore, or in the Logical Order of the Conception of Creation or Derelopment, the Substancive or Naturo-Positive or Sensuous Phenomenal Department of Being is itself reducible to pure Nonentity, or, at the most, to a relative and contingent or merely seeming Existence.
810. In a somewhat similar manner there is a reduction to Nonentity of the apparently real World, effected theologically, in respect to Evolution in Time, by placing God, or the LogosConception, back of the Visible Creation, as a First Cause and absolute Fountain of Being. The same Subordination, ending on the Annihilation of the Natural World, is effected metaphysically, and in respect, as it were, to Existence in Space, by the Transcendental Philosophy, of which Hegel is the culmination, as previously defined, (t. 114). With him the Lineation or Limitation of Being, the Logos-Element abstractly, not personally, is the Totality of Real Being. Sweden-
borg is intermediate between the Ordinary Theology and the Pure Abstractness of Hegelianism.

S11. It results, from what prececles, that the simple terms Positive and Negative have no true scientific validity, for the roant of sufficient definiteness of meaning. The NaturoPositive is the Sciento-Negative, (Logical, Rational); and inversety, the Naturo-Nfgative is the Sciento-Positive. The whole Department of Being which is occupied by Pure or Exact Science is, from the Natural, Observational, or Sensuous point of view, a Domain of Pure Nothings. The Arena of this Ideal Branch of Being is, in the first place, Pure Space or Boundless Vacuity ; and, secondly, the Discriminations introduced into it by the Reason and the Logical Understanding, as Points, Lines, and Planes. These last are then equally, from this point of view, Pure Nothings; while from the Rational or Scientific point of vicw, -endorsed by Faith which belongs in conjunction with Knowledge, ( $\mathbf{t} .17$ ), -this is the only Positive Domain, so much so that Positivism is the pre-eminent boast of Science.
812. It would seem to be the last and decisive word of Universology and Integral Philosophy upon this Subject, that these very Discriminations themselves, between the Sensuous Perception and the Highest Rational Conception of things, are alike indispensalle to each other, in order to the Constitution of any Real Being or Existence uchatsoever; that, in other words, they are Aspects merely of the Totality of Being, and not different and wholly independent Entities. While these and other similar Metaphysical Discriminations are real and eminently important as Discriminations, the distinct Perception that this and all Analogous differences are Aspectual, and not Entical, will, it is thought, introduce a new Principle into all our future Philosophizing. (c. 21, t. 267, t. 000).
813. Another important Principle connected with this Solution is the fact that: In the Subdivisions of any Domain, that One of the Troo (or More) Halves (or Parts) which has in it the
most of the Principle which characterizes the Domain as a Whole, or which, in other words, is the Dominant, or, as it were, the Kingly or Royal Division, takes the lead or governs within that larger Domain which is so subdivided, and the other Divisions are subordinate, and, as it were, loyal to it. This somewhat complex but important idea is an instance of what has been previously expounded, and which was then consigned to the the Formula : Loyalty to the Dominant of the Domain (t. 523).
814. The illustration of this Principle is found in the case before us, in the fact, that within the Natural and Sensuous Domain of Being-the Naturismus,-the Subdivision Something, which is more Sensuous and Palpable than the Nothing, takes the lead, and is Positive or Governing ; while within the Rational and Logical Domain-the Scientismus,-it is Pure Form, or that which approaches most nearly to what from the Natural point of view is Pure Nothingness, which takes the lead over Plenal Form, notwithstanding the fact that this last, by association with Substance, has in it a shade more of Palpable Seeming. The Sub-Dominant or less leading members of each Partnership are then frequently omitted from mention, and the Entirety of the Department represented, in either case, by the Dominant Subdivision-to which the others then accede or are Loyal. It is in this manner that the otherwise Fourfold Discrimination-Something and Nothing in Plenal Form and Pure Form respectively,-is abridged and reduced to the simple naming of the terms Substance and Form, while there is at the same time a scalene, skevoed, or diagonal direction given to the New, Abridged, and Concrete, Classification as illustrated in the following Table:

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\text { TABLE } 45 .
$$

NOTHING.
Naturo-Negative.
Pure Form. Sciento-Positive $=$ FORM.


SOMETHING. Naturo-Positive $=$ SUBSTANCE. Plenal Form. Sciento-Negativc.
815. Plenal Form is allied with the $\Lambda$ bstract-Concrete of Echosophy (t. 574). Pure Form is graphically or diagrammutically represented by Light Lines, tending, as far as may be, to Absolute Thinness. Plenal Form, associated with Substance, is then analogically represented by Thick or Heavy Lines, which are also suggestive of the conception of Object or Thing, or of the Concrete World as contrasted with the Abstract. Indeterminate Form is analogically represented by Brolien and Confused Line or Assemblage of Lines, crooked and interlocked in all various directions-a Chaos of Limitation, (t. 509). This Chaos of Limitation made of light or thin Lines, is the Analogue of the Naturo-Negative Chaos of speculative ideas, as in the Hindoo Philosophy previously so characterized, (t. 87, 88). A similar Chaos of Limitation made of heary or thick Lines is the Analogue of the Naturo-Positive Chaos of the old Greeks-the confusion of elements, substances, and things, (t.90). All other Varieties of Form have similar Analogical Alliances with Departments of the whole Domain of Philosophy.
816. The Point, Line, and Angle are the Simple and Primitive Abstract Morphic Analogues of the Numbers One, Two, and Three, (t. 530, 532, 533). The perception of this Analogy is as old as Pythagoras. The how of this echo of ideas is this: The Point is obviously enough the very best representation of Abstract Unity-its Abstractness by its want of dimensions, and its Unity by its concentricity or the gathering of all its being at a single Absolute Centre. The Line is an ideal Connection between two Points, as previously demonstrated (t. 531). It is thus, while in itself a One Thing, the Abstract or Rational Representative, nevertheless, of the idea of Two, sensuously signified in the two Points. The Angle is the Twoness of Line, -as such single Representatives, brought to a Point of Unity at their apex or conjunction, which as a Point is representative of One. The legs and the
apex of the Angle are therefore representative collectively of Three, (t. 533).
817. Previously the Globe Figure has been taken as the concrete Symbol of Thing universally. Here we have the Point, as the abstract Symbol of the Unit, and hence of any or every Thing or Person considered as One. The relation of the Globe and the Point and their mutual repetition of each other, through Atom and Monad, as Concretoid Entity, is traced out as follows:
818. The Universe has been virtually described above as a Point expanded infinitely in all directions (t. 789). At the Opposite Extreme of Magnitude, on the contrary, is the Ultimate Atom or Least Portion of Substance which the mind can in a given state possibly conceive. The Least Atom is allied with the Abstract Point. This is likewise naturally and necessarily apprehended in thought as a Globe or Globute (a little globe), and for the same reason viewed inversely; that is to say, in contracting more and more the dimensions of any imaginary object, the Universe itself, for instance, its extension, in the absence of any motive to determine the mind to an opposite procedure, is diminished equally in every direction until the least conceivable size is attained, and the result is, necessarily, the globular form of minutest extension. Hence the Possible Space beyond the limits of the larger of these Globes of Conception, with its inexhaustible possibility of further expansion,-for the Mind recognizes in failing to go farther in either direction its own weakness only, not the limit of 'Possible Existence,-is the type of the Infinitely Great, or of Infinity in the direction of Magnitude; and the Interior of the Smaller Globe is in like manner the type of the Infinitely Small, or of Infinity in the direction of Minuteness (or Minitude).
819. The Intermediate Space between these Two Opposite Poles of Existence, the Infinitely Great and the Infinitely Small, is filled by the Actual Universe; that is to say, by

Bodies of various dimensions, and by the Interstices of Space between such Bodies.

S20. The largest and most prominent of the actual bodies which compose the Universe are the Suns and Planets of our domestic Solar System, and of other Systems, and especiallyin appearance to us-the Earth and the Sun. These various bodies either include or sustain all other sensible bodies. These great Masses of Substance are Globes, coinciding in form with the absolute Conception of the whole Universe on the one hand, and on the other hand with any possible conception of a Least Particle, Atom, or Molecule, (t.789, 818).
821. These Planetary Globes are presented to our observation through the sense of sight-the most external and outreaching of the senses, and that which is most especially allied with Form or Outline,-and as they appear to it, they are disks merely, and not globes. It is only by the aid of reason that we ascertain them to be round in the globular sense, (inasmuch as the eye takes no cognizanze of the dimension of thickness). The Outline of a Disk, and, therefore, that of a Globe, as seen by the eye, is a Circle. The Level Surface of the paper on which we write and print, corresponds to the Sense of Sight in the fact that it presents objects extended lengthwise and breadthwise, but not in the dimension or Thickth (thickness) c. 1. Hence the natural and proper diagram to represent the Globular Form on paper is the Circle, and since, as we have seen, the Universe is conceired under the form of a Globe, a Circle in its Sidewiseness, and as an Area, is the Hieroglyph of the Universe itself, of which it is

[^79]then regarded as describing the Outline or Circumference. The Curving Continuity or Lengthwiseness of the Circle, as a Peripheral Line, is, on the contrary, the well-known Symbol of Eternity, or the Endlessness of Time.
822. If a Circular Expanse be diminished on all Sides until we can distinguish no longer, even in imagination, between its Centre and its Circumference, the Residuum is a Point, which Point will then occupy the Position in Space which was the Centre of the Circle originally assumed. Hence a Point at the Centre of such Circular Expanse symbolizing the Universe is the Natural Hieroglyph of the Primitive Atom, or Least Portion of Substance ; thus,

823. The External Space outside of and beyond the Limit of the Circular Expanse corresponding, as it does, to The Infinitely Great, which is beyond our capacity of conception, the Circular Periphery itself is merely the Limit of the Finite Universe in that direction ; that is to say, of the Universe such as the imagination is capable of conceiving it. In
like manner, inasmuch as the Interior of the Central Point-which Point is still, theoretically, a Circle (or Globoid) Expanse, capable, as we admit in our reason, of infinite cle,pres? of diminution beyond where the imagination is able to jollozo it,-corresponds to The Infinitely Small; the Rim of the Point, so to speak, is the Limit of the Actual or Finite Universe in that direction (towards the Minute).
824. The Limited Space included between the Centre and the Circumference of the circle, (which space is usually also meant by the common term, Circle), together with the Objects and Lines thereafter to be inscribed in it, then correspond to the Actual or Finite Universe.

S25. In the first place, while we recognize rationally that a Point is, in the aspect of it above described, a Circumference containing or surrounding a Vacancy too minute to be detected by our vision, which Space itself has then a still finer CentrePoint; it (the Point) is, nevertheless, theoretically taken, itself, for an Absolute Centre. Still again, it is, to our sensation, a minute Disk or Dark Spot of the Slightest Possible Diameter, on the paper. As a Disk, however, having any appreciable diameter, it is the Superficial Hieroglyph or Graphic Sign of a Prnitive Aton, or of the Least Constituent Portion of Material Substance.
823. The Circle (as a Circular Expanse representing a Globe) is, therefore, the Hieroglyph of the Universe, and also of any Orb, Planet, or Globe; of a World, therefore, in either sense of the word ; and the Appreciable Point at the Centre of it is the Hieroglyph of a Primitive Atom situated as the Centre of that World.
827. But, observe that, with respect to the Circle representing the Universe, the Centre-Point of it is the precise standpoint of the Observer, whose imagination, going outward equally in all directions, has dictated, by the Laro of its oron operation, the Globular Form, which is represented by the Circle. The Selfhood, the Conscious Ego, the Living Spirit-
ual Soul, which thus prescribes, by its own potency, the Outline Scheme of a Universe, is itself seemingly without extension, a Unit of Spiritual Being, a mere metaphysical or Supersensible Point, corresponding not with the Sensible or Visible Point even, but with the still finer Abstract Rational Point, which is, theoretically, the Centre of IT (t. 825).
828. The following Diagram is representative of the Universe, or of a World, with the Atom of material Substance at its Centre:

829. The Circle represents the Universe or World ; and the Sensible or Visible Point at the Centre denotes the Primitive Atom of Matter, now with its enveloping Cell-Wall. Still at the Centre of this Visible or Sensible Point-itself theoretically a Circle contracted to its least dimensions-is the Invisible, Supersensible, Metaphysical, or Spiritual Point, which represents the Soul or the Conscious Ego of the Molecule ; the Spiritual Atom enclosed within and centering a Material Atom, which is its bodily Envelopment. The Type of the Atom and then of the Primitive Cell so Constituted is, then, equally the Type of the Constitution of a Man; the Sensible or Visible Point, Centering the Universe relatively to him, is the Body of the Man, and the Finer Supersensible Point within it, and only rationally procured, is the Type of his Soul.
830. The Graphic Symbols of these two, the Material and the Spiritnal Atom, respectively, when, however, disengaged, may be a Large and a Fine Dot; thus:

Diagram No. 55.
831. As we are compelled to give some dimension to the Point when written, although it is, theoretically, without dimension altogether, so again, here, for the purpose of representation, we are compelled to assign a difference or ratio of dimensions to objects, each of which is, theoretically, and in a certain sense, in each case, infinitely small. The Calculus of the Higher Mathematics has made us familiar already with the idea of different Orders of Infinity in the realms of the Infinitely Minute.
832. But, again, to represent the two oljects, the material and spiritual atom, in situ, (in their natural positions relatively to each other), the Smaller Dot should be within, and at the centre of the Larger one. To effect this arrangement the Larger Dot which has been theoretically derived from the contraction and diminution of an immense (Heavy-Line-, or Concretoid) Circle as large as the Universe, must be again relaxed and slightly expanded so as to become recognizable by the eye as a Circle, and not as a mere mote, in order that it may then accommodate the Smaller Dot at the Centre of the Space within it. We have thus, precisely erolved, the Typical Morphic Representation of the Primitive Cell, the Basis of all Real Organization; thus:

$$
\text { Diagram Nu. } 56 .
$$

(a)
833. We have now, also, in this combination of ideas, the exact reproduction of the Leibnitzian Notion of the Primitive Monad ; a least Element of Being, still compound, presenting
a Material and a Spiritual Aspect inseparably combined, and yet clearly distinguishable from each other ; a Personality, so to speak, in the least form, its Soul or Conscious and Mentoid Focus contained within, and centering its Material Body.
834. It will be seen, as we proceed, that we are gradually revealing the Primitive Type of the Structure of the Human Organismus, and, at the same time, of that of the Universe at large, and of every other subordinate or inferior Organismus ; and that we are establishing the Echo or Repetitory Relationship of Organized Being in any one Realiy or Sphere with that of Organized Being iv all Realims and Spheres of possible Existence or Conception.

S35. We are here also illustrating the Most Subtle and yet perhaps the Most Important idea at the foundation of Universology, namely: That The Necessary Evolution of Thought in the Mind is at the same time the Lat and Model of the Actual Evolution of Real Existence in the Universe of Matter; so that there is a Discoverable and Precise Echo, in Generals and in Particulars, betroeen the Logical Procedure of Pure Thought and the Practical Procedure of God or Nature in the Creation of the Universe; the Discovery and Codification of which Parallelism of Evolution is Universology itself (t. 930).
836. But again, the Thick or Heavy Point, while it is a Globule, is also typically a Globe, and a Universe itself ; for the question of Mere Size, from the time an object is sufficiently developed to begin to be appreciated at all, as having size, up to Unlimited Immensity, is not, from the Point of View of Universological Science, an Essential Difference, but one of Degree merely, of that which is in fact the same Entity. The Infinitely Minute and thé Infinitely Extended are subject to the same Model in Organization or Type. In other words, from the Universological point of view, questions of Mere Magnitude, as well as those of the Material Wrought in, lose their importance, and questions of Model
and Type, or of the Morle and the Lavo of Development, come uppermost and completely transcend them. To render oneself thoroughly familiar with this Change of base, will, doubtless, require a revolution, sometimes gradual, and sometimes perhaps violent, in the mental habitudes of the more Specialist in Science.
837. The Thick or Heavy Dot becomes, therefore, the Analogue of Individualized Body, generally, and hence, in a more concrete sense, of Matter ; and the Rational Centering Point, the Thin or Light Dot, is then the Analogue of the indwelling Soul, Spirit, or Mind. (Specific meanings of these several terms will be established elsewhere.)
838. In respect to the Numerical Unit, the Analogue of the Morphic Point, and hence also the Analogue of Body or the Body and its Centering Rational Soul, it is the Graphic Sign of this Unit;-namely, the Written Digital Figure (One)which is the superficial Analogue, as it were, a Dress of the Body. Within this is The Spolien Word, the Body of the Unit, as when we pronounce the word, One. The Mind or Soul of the Unit,-the Rational and Spiritual Unit itself,-is then the Meaning or Idea, the thought of the Unit in the Mind, or Ideal Unity, which we embody, first, in the outward, (the Spoken Word), and then in the more outward sign or expression, (The Word as a written Sign).
839. It is thus that we have in the very first Element of Form,-the Point,-and in the corresponding First Element of Number,-the Unit,-precise Analogues of the Constitution of the Total Universe, and of this again as repeated by another echo of Analogy in the Constitution of the Human Being, with an External Envelopment or Dress as Outermost, then with an Interior Body; and finally, with an Inmost Rational Soul. All of this repeats again the Constitution of the Primitive Cell, the Basis of all Natural Organization.
840. We have thus traversed the Numerical and Morphic

Analogues (in conjunction) of the Something and the Nothing, and then of Matter and Mind. The next Couple of Primordial Elements is: 1. Station or Rest ; and, 2. Motion. The exposition of this class of Analogues has, however, already been made in part, while treating of Number in the preceding Chapter (t. 616). It was then shown that the Cardinal and the Ordinal Numbers are the Analogues of Station and Motion respectively, and secondarily of Space and Time, the Negative containers of these Positive Categories of Conception. (See Dia. No. 45, t. 670).
841. It may with propriety be repeated here (t. 307) that Integral Numbers are Objective and External, as Fracmons are Internal and Subjective. The last are strictly not Fractions, (Lat. frango, to break), but Sections, (Lat. seco, то cut), or Compartments withiv any single Unit, precisely echoing to the external apartness of the Integral Units, which enter into the corresponding group. Fractions correspond, therefore, with Internal Form, as the Rooms of a House (Sp. quartos, ROOMS, QUarters or FOURTHS); and Integers correspond with External Form, as of the Front and Sides of the House, and its directional relations to other houses.
842. The Single Unit or Individual Thing has for its Morphic Analogue the Single Dot or Point. Plurality-and hence Aggregation, Masses of Substance, and Society-as we say the Masses, for the People-have for their Analogue the Aggregation of Dots or Points (t. 251, 400-2, 530, 552, 600, 609, a. 8, c. 32, t. 136). This may be Incoherent or Irregular, as Society in its period of social Incoherence-a mere mob of Individuals; or it may be Orderly and Organized, as Society when Organized in Groups and Series, of which we have a compulsory type in the Organization of the Army. Free Organization in Industrial and Social Groups and Series, presided over by the Science of Organization to be derived from Universology, belongs to the Future. Singular Number or the Unit corresponds, therefore, with Monochrematic Form, (one-
thing-form), and Plural Number or the Group of Units, or the Sum, corresponds with Groupial, Racemous, or Collective Form. S43. Odd Numbers correspond with Inclined or Sectoral Form, as was sufficiently explained elsewhere. This echoes in turn to Round Form, and hence to Reality, Substance, and Mass, in respect to its freedom from the constraining influences of Normal or Segmental Form. We say Inclination, or Leaning, for that which is governed by the Spontaneity of mind, as against the Level and Balance of Reason. Even Number corresponds with Segmental, Normal, or Square Form, and therefore with the idea of Conformity to Laro,-the suppression of Spontaneity, and thence with the Orderly Description and Training of Things, or of Minds, or of Shapes and Ideas, (in-formation); and hence with the Formgiving Element itself, even as distinctive within the Domain of Form. The following Diagram illustrates Odd and Even Numbers, and their Analogy with Odd and Even Form :
i
Diagram No. 57.

NUMBER-UNITS.
(Represented by the Point-Element of Form.)

844. The larger and more general Analogue for Station is Statement, as of Sums or Problems, to be solved or worked out; (both terms from the Latin stare, to stand). The corresponding Analogue of Motion is, then, Numerical Operation, or the actual Performance of Calculations. The Statement of a Sum is, in preponderance, Static and Spacic, as it stands or lies expanded upon the slate or the sheet before me. In other words, it occupies Space, or some measure of Expan-
sion. The Numerical Operation is, on the other hand, Motic and Tempic, in preponderance. The Operation or Calculation, even when carried on in the mind, consists of a Succession of Changes, and occupies Time, while in the Multiplication of Number into Number we testify the Analogy of this Succession or Repetition with Time or Times, by the very form of the expression which we employ in describing the Operation, as when we say : Five times five are twenty-five.
845. Numerical Statement is, therefore, again another and higher Analogue of The Cardinal Series of Numeratron, which is, on the contrary, more Elementary. It corresponds with Static, Fixed, or Immovable Form, (Changeless Formis).
846. Numerical Operation or Calculation is another and Higher Analogue of the Ordinal Series of Numeration, which is more Elementary. It corresponds with Motic, Fluxional, or Movable Form, (Changlng Form, which is Motion).
847. Addition is, in like manner, a higher or concrete Analogue of Unism. It is the Unition of Unit to Unit in the production of the Sum. Its Form-Analogue is the Adding or Conjoining of Form to Form at Limits, (Affinity, Lat. ad, at ; fines, boundaries).
848. Subtraction is the similar Analogue of Duism. It is the Sundering of Unit from Unit in the production of the Difference.
849. Addition, Subtraction, Multiplication, and Divisrov are reckoned as the four Fundamental Rules of Arithmetic ; but Multiplication is reduced by Analysis to Addition, of which it is merely a more condensed and comprehensive method, and Division is reducible in the same manner to Subtraction (t. 000).
850. Addition and Subtraction are, then, in the last Analysis, the two, and the only two Fundamental Rules of Arithmetic, as also of Algebra, as expressed by the Plus-, and

Minus-Signs. Addition, or the Plus-sign is, then, Unismal, and Subtraction or the Minus-sign, is Duismal. The Composity and Co-working of these two is the Trinism or Completeness, in this fundamental sense, of the Total Calculus.

S51. Addition thus repeats, as the higher or concrete Analogue in Number, the Number One or the Single Unit as simple element; precisely as the coming together of two Lines, Limits or Boundaries,-as between countries or farms,repeats the Unity of Point as the simplest element of Form. We say habitually, (notwithstanding the contradiction under more critical examination), "the Point at which Two Lines meet," even though we contemplate them as meeting side by side, and at every point along the extension of each Line.
852. Subtraction repeats, as the higher or concrete Analogue in Number, the Number Two as simple element ; precisely as the cutting off of a portion of country or of a farm by a Line which is then viewed as separating the parts, is only a higher instance of the same kind of differencing as that by which any two Points are separated from each other.
853. Numerical Operation or Calculation, repeats, as the higher or concrete Analogue in Number, the Number Three, as simple element. Its Analogue in Form is the Hinging of the Line, in its double aspect, as at the same time the Point of Unition and the Point of Separation, between two Spaces.
854. If now we pursue the Analogues of Number in the Domain of Form, those of these several discriminations of Numbers, and of some other related discriminations, will occur as follows:
855. It was previously shown, in respect to Number, that the Substance and the Form of Nrumber, that is to say, the Entical and the Relational Element which combinedly malie the Existence of Number, are the Individualized Units of Number, for Substance or the Entical Elemint; and the connecting Lines of Thought, or those Lines of Inter-relationship between the Units which constitute them into a Sum or a

Series, for Form, or the Relational Element, within the total Composity or Existence of Number, (t. 503, 555, a. 37, t. 198).

85̃6. Let us place Nine Digital Units in a circle or group, an arrangement congruous with Cardinal Number, Eight of them surrounding One, which is then the Central Unit, and as such, the Pivot of the Group, or-what is the same thingthe Cardo or Hinge of the total Cardination of the Units thus represented. Let the eight outer Units arrange themselves at equal distances from the central Unit, all of which they do naturally in Nature, and in the Thought, by virtue of that Tendency to Equation which is equally the Law of Nature and of Thought, (t. 555, 535).

85\%. Let us then abstract the Lines of Thought which connect the Central Point and the Outer Points, retaining now the Central Point as Pivot or Nucleus of these Lines, or as it were, for the Hub of the Wheel, of which these eight lines are the Spokes, or Radii. This constitutes a second figure differing from the first as the predominance of Line, the formative or Relational Element, over Point the Substancive or Entical Element, causes it to differ, (t. 687).
858. Let us then constitute a third Figure, by inserting the Lines within the first figure, or between the central and surrounding Points ; the Points and connecting Lines making combinedly what really exists synstatically prior to our Analysis. In this Composity of Points and Lines, and in that to which they correspond in the Mind; the Points of Sensation, (a. 37, t. 198), Attention, etc., and the Lines of Discrimination, Comparison, etc., we have the Type of the Constitution of all Things, whatsoever, whether in the Material, or the Spiritual Domain of Existence; the Entical and the Relational Factor, respectively, united in the Trine which is Existence and Berng itself. Unit and Duad, Point and Line, in their Inexpugnable Connexity, and Convertible Identity, symbolize the Constitution of all Things whatsoever, (t. 839).
859. The following Diagram exhibits the three Figures above described with their Numerical Analogies:

Diagram No. 58 .

Figure 3.


Figure 2.

 The Morphic or Relational Element of Number : FORM (of Number.) = Inter-relations, (Laws).

Figure 1. • • • . . . . . . . $\left\{\begin{array}{l}\text { The Substantive or Entical Element of Number: SUB. } \\ \text { STANCE (of Number.) }=\text { Group of Individual Cells, } \\ \text { Atoms, or Persons in Society. }\end{array}\right.$
860. We have here also the solution of the mystery of the Number Nine, which is the fascination of the Poets, and was the puzzle of Pythagoras. The Line-Figure, Fig. No. 2, is constituted of the first two Normal Diamitrits, the Horizontal and the Perpendicular Axial Lines; crossing each other at right angles ; plus the two Sub-Normal Diamitrits, inclining at the angle of forty-five degrees, and crossing each other in like -manner at the Centre. These make the eight Arms, or Spokes, or Rays, which, with their Centre-Point or Pivot, make Nine. The Arms represent, in turn, the Eight Outer-Points, or Units, which, in the First Figure, take the place of them.
861. The Outlying Vacant Space, surrounding either Figure, is then the Analogue of Zero, as already repeatedly demonstrated. The Central or Pivotal Unit, as representative of the entire Group and of all higher Groups of Number, up to Infinity, is then what $I$ have meant by $1=A L L$, so repeatedly contrasted heretofore with Zero (t 867).
862. Zero and the Nine Digits are not, therefore, an ascidental basis of Numeration. They are one of the measured Series of Nature, revealed to the early Intuitions of Man.
863. The Decimal Numeration, so constituted, is, however, only the Naturismal or Unismal Stage of the development of the Total Scheme of Numeration. For the higher purposes of Science, Universology reveals the fact that a Duodecimal Numeration is far more congruous and effective, and it provides the instrumentality, and will expound the method and advantages of, this Scientismal or Duismal Stage of the development of the total Scheme of Numeration. As the Decimal Scheme will remain, however, the more convenient for popular use, the Trinismus of this Domain will be found in the Composity of the two previous Schemes. c. 1-5.
864. The Morphic Type of the Duodecimal basis of Numeration is obtained from the figures in the preceding Diagram, with the addition of the Third Normal Diamitrit which would stand at right angles to the surface of the paper.

[^80][^81]865. The Morphic Analogues of the Cardinal and Ordinal Series of Numbers, respectively, were given in the preceding Chapter. (See Dia. No. 45, t. 670). The single expansive Circle is the Analogue of Cardinal Numeration, and thence of the Cardination of the Universe in Space ; or of Universism itself, as One-Truism around the Single Pivot, (Lat. unus, one, verto, versus, turn). The Succession of Circles is, then, the Analogue of Eventuation in Time, or the Ongoing of Events, as repetitive again of Numerical Ordinality, (Dia. 45, t. 670). This Analogy is so important that its repetition at different points is not inappropriate. It is strikingly shown in connection with the Morphic Analogues of Integers and Fractions (t. 840) in the Important Diagram which follows:
or 144. Taking this basis from me, Professor Thomas Harland, assisted by Professor M. A. Clancy, of the Pantarchal University, attempted the construction of a System of Multiplication in which the relative changes of consonant and rowel sounds, under a law of change inherent in them, should register, in the' form of the derived word or naming, the corresponding number which should he the product of the two factors separately represented by the syllable to which the law of change was applied. This subtle conception cannot perhaps be better described than by saying that the attempt to which it led was an effort to construct a Babbage's calculating machine, the materials employed being the rocal sounds of which the names of the numbers are composed; materials produced at will in the mouth of each individual.
4. The law of change requisite to the desired result revealed itself very beautifully within the Consonant Domain, and, at one time, those gentlemen announced to me that the result would be that every child would be able to multiply up to 144 times 144 with as much facility as now we multiply 6 by 6 ; that every individual would, in other words, carry a calculating machine in his head.
5. Subsequently, on entering upon the Vowel Domain with the experiment ${ }_{2}$ difficulties were encountered from some complexity in the working of the Law which as yet the experimenters have not been able to solve. Professor Harland has promised to endeavor to furnish me with a paper explaining the nature of this investigation, the progress made, and the nature of the difficulty; but, owing to the pressure of his present engagements in the business of the Government at Washington, it will very probably not be forthcoming in season to accompany the present work.

Diagram No. 59.
Figure 1.


Figure 2.


Figure 3.


S66. Figure 2 represents the Important Morphic Analogy of the Odd and Eree Numbers, within the Cardinals (Dia. No. 50, t. 834); and Figure 3 resumes the Cardinality and the Ordinality in a Single View, as of a Planet and its Orbital Line, a basic Universological Idea destined to a great variety of Elaborations. (Dia. No. 45, t. 670).
867. In Figure 1 of the Diagram the Groups of Circles at the right hand indicate the Groups of Units, which are then seriated in the Cardinal Series of Positive Number. The whole array consecutively on to Infinity is, collectively, what is meant by Absolute Positive Unit, or $1=$ All. On the left of the Figure is Zero, counterparting this Absolute Unit. These are the Numeral reproductions of the Metaphysical Something and the Nothing, respectively; the Circles are no other than points enlarged, (t. 118), and, as we have seen, size is a matter of indifference in Universology. (t. 836).
868. The Groupial character of Cardinal Numeration is generalized, in its totality, as One Infinite Group ; and this as an individual body or globoid mass. This, in turn, is represented by the single Circle, Figure 3 of the Diagram, analogous with the Universe in Space.
869. Above the Central Circle Figure, 1 representing the Initial and Central Unit, is the Series of Single Circles which is the Analogue of the Ordinal Series of Nrumbers. This accords with the idea of Succession in Time, and when epitomized down to a Single Line, as constituted of a succession of points, the Line or Track is the Analogue of Time, as shown in Figure 3. (t. 155-156, 214, Dia. No. 45, t. 670).
870. Below the Central Circle, the Analogue of the Primitive Unit in Figure 1, there is, extending downwards, a CounterSeries of Circles which are subdivided or sectionized interiorly into Parts or Fractions. These Parts echo, number for number, to the Corresponding Cardinal and Ordinal Whole Numbers of the Integral Series. These are then the Morphic Analogue of the Fractional Series of Numbers. (t. 305, 314, 341).
871. The Fractional Divisions of the Single Unit, as Halves, Thirds, etc., are here exhibited abstractly in a series of different circles for the sake of the illustration ; they all, however, actually occur within the Single Unit, and, therefore, they are properly Subdivisions, Merely, within a single Circle. There is, thus, an Infinity of Fractional Units with in every Single Integral Unit. In this sense Every Single Unit is literally a $1=$ All, or a Unit embracing an Infinity of Units within the compass of its own organization.
872. The sectionizing of the Single Unit within itself in the production of the so-called Fractions is, as it were, a process that proceeds in the dark. It is like the interior divisions of our own bodies, which are hid from our view. Fractions are thus the Analogue of the Subjective Domain; and as the Interior of the Earth is associated in respect to Darkness with the Shaded or Night-Side of the Planet, the Circles illustrative of Fractions in the Diagram are shaded for the sake of the Analogy, (t. 341).
873. The Integral Groups and Series, that is to say, the Groups and Series of Whole Numbers, are, on the contrary, outlying, the Individual Units separated from each other with Interstices of Free and Luminous Space between them. It is as when the Observer, instead of looking into himself subjectively, looks outward objectively, upon the Groups and Troops or Trains of the Bodies of other Men, or upon the Planets in the Heavens. Even his own body, as externally viewed, belongs to the same objective category of perceptions. The circles representing this style of numbers are left unshaded to indicate the general day or luminosity of the Objective Domain. The Primitive Unit standing midway between the Fractions and the Whole Numbers, to both which it is hivgewise or pivotally related, dips down halfway into the obscurity of the Subjectivismus, and arises with its Aerial Dome or Hemisphere like our Residence on the Planet, and like our
outlooking Mental Experiende, into the luminosity of the Objectivismus (t. 307).
874. Fractional Numbers are thus the Numerical Analogue of the Subjective World or the World within ; and the Whole Numbers, with their orderly arrangement in Groups and Series of Groups, are the Analogue of the External or Objective World; whether it be the World of Men in Society, or the World of Things, and then pre-eminently of the Planetary Bodies in the Solar System, the type of Measured Series and Harmony in the Universe, together with the still farther outlying World of the Fixed Stars, which are distributed, to our perception at least, in Free and Unmeasured Series like the sands on the shore (t. 307, 341).
875. The Point or Single Circle, representative of Globe, the Enlarged Point, and hence of Thing, Planet, World, is, as previously shown, the Analogue, therefore, of the Single Unit, or of the Number One, (t. 532,541).
876. Any two Points are, consequently, the direct and literal Analogue of the Duad, or of the Number Two.
877. But, as already shown, likewise, (t. 532), it is not the Two Points themselves, but the Straight or Stretched Thought-Line-which intervenes between them, and makes them into a Two as a Sum-which is the single Sign or Thing representative of the Principle of Duism, or, in other words, of the Spirit of Two. This is, in turn, Morphically considered, the Quality of Straightness. The Line intervening between the two Unit-Points is, by Absolute Necessity, by Tendency to Equation, and by Economy of Means, which is the assumption of the simplest method for the attainment of ends, Straight, and not Crooked or Curved; for wheresoever a Line is broken, there occurs a New Point, so that, in order to envisage the Primitive Intervening Line, we must then contract our attention to the Straightness which occurs between the First Point, and the Break or Angle which now occupies the position of the Second Point. Stralgitmess is, therefore, the

Morpric Analogue of DuIsm, and its exact Echo within this new Domain ; as Roundness, on the other hand, is the Analogue of Unism. The Iteration of this statement is demanded by its importance (t. 516).
878. The Point is alike representative of the Real or Concrete Unit, and hence of Thing, Planet, World ; but it is then a Derivative from that Point which is the precise Analogue of Unism or the Spirit or Quality of the Unit. To obtain this Derivative, of the same order as the Straight Line, that is to say, itself a Line of a Different Character from the Straight, let the Point be first enlarged into a Circle, and then take a section or any portion of the periphery of such Circle as the Line sought for. This will have in it the quality of Roundness, as the Counterparting Quality to the Straightness of the True or Primitive Line. It will be a Curve of the Circular Order of Curvation. Roundness is, throughout, the Morphic Analogue of Unism, and its exact Echo within this new Domain. All of this is again repeated from previous statements, but with a view to new applications, (t. 5\&7, 516).
879. Strictly speaking, therefore, the Point and the Line are not the Analogues of Unism and Duism, as previously stated, but the Point is the Analogue of the Concrete Unit, and of its Analogues, Thing, Planet, Real World, (t. 541); and the Line is the Analogue of the Abstract Duism, the Spirit or Quality of Two, the intervening Nexus, Relation, or Law.
880. To unite the Point itself (not now the Curve derived from the Periphery of the Expanded Point, t. 547) and the Line in a Single Compound Figure is, therefore, to obtain the Epitome or most elementary representative of Elaborate Existence: that is to say, of Existence in its next higher Stage of Development above the Abstract Conception typified by the Perpendicular or Uprising Line in Diagram No. 43, (t. 634). The New Figure resulting, while therefore Elaborate, is still the most Elementary Exhibit within the Elaborate Domain of Form.

S81. The Figure so compounded-the Point as Head conjoined to the Line as Trunk, at its End, by means of a Neck or more attennated Line of Connection-is then, symbolically, or in Type-form, and also, actually, or in Embryonic Development, the Primitive Trace of the Human, or of the higher Animal Body. This Figure, so compounded, I denominate, technically, an Anthropoid (Gr. Anthropos, Man ; Eidlos, Form), or-with reference to its Smallness as a "Primitive Trace" within the Egg or Embryo), an Anthropoidule. Its composition is shown, and it is carried up through sereral degrees of its higher development in the following Dirgram :

| Diagram $\mathbf{N o . 6 O}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Head. | Trunk. | Anthropoidule or <br> Primitice Trace. | Secondary Stage |
| of this idea. |  |  |  |$\quad$| Anthropoid. |
| :---: |
| (Embryonic.) |

882. The shrewd observer will detect the fact that the Point, and therefore the Head, should, by the first drift of Analogy, represent Substance as the Concrete Factor of Existence, and that the Abstract Line, and therefore the Trunk, should, by the same reasoning, represent Form. The reason why this first drift of Analogy is reversed in the Human Body is one of the Grand Arcana of Universology, involved in the following Law: That it is the purpose within every career of Progressive Development so exactly to reverse the primitive condition of Things as to change all Primitive Analogies into their Opposites. This is the Grand Terminal Conversion into Opposites, which Nature is everywhere striving to effect. It is The Conversion, Regeneration, or New Birth, which is everywhere called for in the nature of Things. In the ultimate elaboration of the Human Figure, the Trunk represents Substance, or that which stands under, (Lat. sub, UNDER ; stare, TO STAND),

Ce. VI.] CHILD AND MAN ; FALSE AND TRUE VERTEBRATES. 533
and the Head, with its Face and Features, comes to represent Form or Feature.
883. The Fact in question is illustrative, as just stated, of a Grand Terminal Conversion into Opposites, as between Origins, or Prinmary Domarrs, and Final Elaboration or Complete Development,-a Principle which is formulized as

The Polar Oppositeness (or Avtithetical Reflexion) of Pricitive States and Ultimate Elaboration; or,
Terminal Conversion into Opposites between Incipiency and Finality.
884. It is the Grand Operation of Nature so to turn upon the Axis of the Universe, (the Infinite One Turn, Lat. unus, one, and versus, TURN), that the outcoming of Exposition shall contradict the Elementary Outlay of Appearances. Such is the Artistic and Dramatic Element inherent in the very Constitution of Being. To illustrate: The Child is born with its Head downward, while it is destined to pass up through successive stages of position, in arms, and creeping upon the floor, until, finally, it reverses its Primitive Posture, and stands erect. So, the lowest Forms of Incipient Vertebrates, the Pseudo-Vertebrates, as we may denominate the Cuttle Fishes with a Primitive Trace of an Interior Skeleton, carry their Heads directly beneath them, and are hence called Cephalopods (Heads for Feet). The True Vertebrates then commence rectifying their Position, and do it more and more as they ascend in rank. The Fishes are Horizontal ; the Reptiles elevate the Head somewhat more. The Spirited Horse strives hard to lift his Head above the beast-like level ; the Pseudo-Man or Monkey arrives at an Angle of $45^{\circ}$; some Birds do the same; but Man alone achieves the Perpendicular, and so reverses the Poles of the Primitive Destiny. A similar Inversion concerns the Relations of the Elementis-
mus and the Elaborismus of Being. The same Principle prevails in the Calculation of Social and Moral Destinies. "The First shall be Last, and the Last First." The Subject begins to expand, on all hands, beyond the limits of our present purpose.
885. This recondite subject will be discussed elsewhere, and is early introduced here to remove a stumbling-block which might suggest itself to the reader ; but as it occurs it offers the favorable opportunity for recording the Principle, in Appropriate Formule.
886. Let us recur for a moment to the more Blended Composity of Curvature and Straightness, prefixing the Typical Curve and Straight Line, as in the following Diagram:

## Diagram No. 61.

## Elementary Forms. (Dia. No. 10, t 512).

Arc of Circle-NATURE. Straight Line-SCIENCE Line of Beauty-ART, c. 1.

887. It is no valid criticism upon these Analogies to say that Nature never accomplishes a true Geometrical Curve. It is her Drift or Endeavor, so to speak, to do so, and hence the predominance of circular and globular Types of Form, proximately, though not actually, throughout her Domain of Operations; and again, it is in Science, which is Exact, that the Primitive Curve is the Analogue of this quality in Nature, treating it by Abstraction as if it existed in Nature (t. 511).

Commentary, t. 886. 1. Hogarth's Line of Beauty has itself a threefold development, elaborated under the guidance of Universological Principles, varying the Curve, and each of these again other threefold variety, as Types of higher and higher Evolutions of the Artistic Idea. These details will be appropriate to future special Expositions of these new Principles in the Domain of Art.

In other words, Nature, in the Actual or Concrete, or, as she exists, is not herself-in this technical sense-purely natural. She has likewise, within her composition, the element of Straightness, as, for example, in the formation of Crystals, which element is, nevertheless, in the same abstract sense, preponderantly, the quality and the characteristic of Science, as contrasted with Nature (t. 522). The result is, that what we call Nature, in the actual, resultant, concrete World, is always interblended, her own characteristic Roundness being present in Mere Preponderance only, as testified in the general or proximate Rotundity of Planets, Orbits, etc. In her General and Superior Expression, therefore, Nature is herself Artistic, and the Egg is, so to speak, an Art-Product of Nature, and in a still higher degree the Grand Animal, and the Grand Man, born of the Egg, are so ( $\mathbf{t}$. 514).
888. The Mineral Kingdon, and especially in bulk, as Planetary and Orbital Masses and Careers, is then the Grand Analogue and Embodiment of the Naturism of Nature; The Vegetable Kingdom, with its Limbs, Limitation, or Branchiness, and its Straightness and Uprightness of Trunk or Centre-Line, is the Grand Analogue of Measuring Rods or Reeds, and of Standards, and is the Embodiment, therefore, of the Scientism of Nature; and, finally, the Animal, and pre-eminently The Hominal Kingdon, with its Interblending of all Analogues, as intimated in the Composition of the Anthropoid, (Dia. No. 60, t. 881), and the Line of Beauty, (Dia. No. 61, t. 836), is the Analogue and Embodiment of the Artism of Nature.
889. Technically, the Mineral Kingdom is, therefore, the Naturismus of Nature ; the Vegetable Kingdom is the Scientismus of Nature ; and the Animal Kingdom, culminating in Man, and finally in Society, or strictly, in its Naturismal Stage of Development, is the Artismus of Nature.
890. Science then intervenes to study, to comprehend, and to classify Nature, as the Animal World, for example; and
finally comes Art to reproject a Higher or Renovated Nature, as in the skilled breeding of Animals (from Science); and in the higher culture of Man, and in the Skilled Organization of all human affairs, culminating in a Divinized and Angelic Human Consociated Life, the God-intended Destiny of the Race. It is here that first the Straight Lines, as Measurers and Standards, Platforms and Lays or Laws, (Scientoid), and, secondly, the Serpentine or gracefully curving Lines of Art, come to predominate over the prevalent rotundity of Nature; while, however, it must never be forgotten that all Lines occur in all Domains, by Inempugnability; that there is Overlapping throughout; and that the discrimination is one therefore of mere Preponderance, or Degree ( $\tau .526,603$ ).
891. In other voords, Nature has a Naturismus, a Scientismus, and an Artismus of her own ; and so also have Science and Art; as so, indeed, have all Domains and Objects and Aspects of Being in the Universe ( $\mathbf{t} 522$ ).
892. The Anthropoid or Figure of the Individual Man is, by rirtue of the Neck or connection of the Point-, and LineAnalogues of Unity and Duism, a Cardinismus or Minge-like Apparatus. The Head is representative of the Unit, and the Trunk, as a Line or Bar ideally swinging from this Pivot, is the process or projection which turns upon the pivot, as the gate swings upon its hinge or hinges.
893. The Pathway of the Man as he walks through the Field is then an Ordinismus or Successionary Scheme, or Series of Individual Steps, connected by intervening Traces or Lines. If the points be single, as when the tracks of the separate feet are not discriminated, there is a Simple Order, merely, as the result. If the discrimination takes place, there is then Co-ordination, or Parallel Development of Seriated Lines. (St. O. t. 000).
S94. It results from the preceding paragraph that the Cardinal Series of Numeration may be epitomized and represented Morphically by the Anthropoid,-the Head representing the

Unit,-the Line representing the Spirit of Two,--the Concrete Unit and the Abstract Twoness, then combining in a Trinismus, which, as the Head of the Total Cardinal Series of Numbers, represents in turn the whole of that Series.
895. It further results that the Series of Stepping-Points in any Pathway of Progression is in like manner the Analogue of the Ordinal Numbers, which may therefore be epitomized by any portion of such Series of Steps, or, in other words, of any Orbit or Pathway whatsoever. The Point at which the Man stands at any given moment, in the prosecution of his journey, is the Point to which he has made headway, and is to the Succession of Points in the Trail behind him what his own Head is to the Trunk and Limbs of his Body. This Standing-Place requires, therefore, to be distinguished Morphically by a distinctified Point, as the Head of this ordinal epitome. It is the First Stepping-Point in respect to Rank, Dignity, or Attainment, while it is the last or latest in respect to Progression in Time. The Pathway through the Field traversed is, then, repeated within the Trunk or Body of the Man, that is to say, in the Skeleton, by the Spinal Column, the Vertebrce with their primitive doubleness or two-sidedness of Constitution repeating the Steps or Tracks. The Vertebral Column in Man or any Vertebrate appears as a single column ; but analyzed with reference to its Typical Plan or ideal origin it is really double, or two columns smelted, so to say, into one. It repeats, in this respect, the constitution of the entire body. There is here also an instance of the Involution of Analogues (t. 101). The Pathway of the walker is repeated by the Tail or Trailing-after-part of the body of an animal, as the serpent, for example; and, finally, the Animal Tail, an external prolongation of the Internal Vertebral Column, is repeated by the Internal Vertebral Colümn itself. The subject is too complex to be fully elucidated in this incidental mention, and must be referred to the Structural Outline of Universology, a subsequent but related work. The following Diagram
will furnish in comparison these two Morphic epitomes of Cardinal and Ordiual Numbers, respectively :

Diagram No. G:
Figure 2.


Noten-Forms inceptive of the Constitution of the Human Body. c. 1, 2.
896. If, still further, we remove the Heads from these two Types, one of Cardinal Existence, and the other of Order, there will remain, for the former, the Line merely, the Sign of Duism, which now becomes the Morphic Clef, or the most

Commentary, t. S95. 1. As Cardinality repeats Unism, (the Sum or Group of Units repeating Unity), and Ordinality Duism (the Order or Succession repeating Separateness of Position); and as Unism and Deism are the Primordial Principles of All Timegs ( t 203); and as Unism is (morphically and most radically) Point or Head in miniature, and Duism is Line or Trunk in miniature; and as the Point and Line, cardinated or hinging upon each other, constitute the Anthropoidule, (t. 881), which is the Primitice and Elemertary Trace of the Iuman Figure, (t. 881), it results that the Human Figure, is, in an Elcmentary sense, necessarily impressed upon excrything uchich Exists or
epitomized representative of Cardinismus; and for the latter, the simple Series or Succession of Points, connected by intervening Lines, as the Morphic Clef or most epitomized representative of Ordinism, as seen below :

$$
\text { Diagram No. } 63 .
$$

## Cardinality.

Ordinadity.
897. Unism and Duism, as hitherto treated, in respect to their Morphic Analogues, apply universally to Indeterminate as well as to Determinate Spheres. We pass from this universal view of the Subject to a more determinate and specific one. This brings us to the consideration of Odd and Even Form, new and important discriminations within the Morphological Domain. This is derived from the Numerical Oddness
stands forth from Creative Origins (as upon the Universe at large, in Space as Head, and in Time as Trunk, Trace, or Trail, Dia 45, t. 670) ; upon everything, in Theological Language, "which proceeds from the Lord" - (everything Good, the Unismal Element of Sentiment, as tending towards Unity, and everything True, or constitutively adjusted, the Duismal Element, as tending towards Individuality and Variety even of the Unity).
2. Prepared by these explanations, let us now listen to Swedenborg's theological and mystical statement of the same Principle, as impressionally or intuitionally perceived by him: "I will, in the last place, communicate a certain arcanum, which has hitherto been known to none. It is this, that everything Good and True that proceeds from the Lord, and constitutes Heaven, is in the Human Form ; and that it is so, not only in the whole, and on the greatest scale, but in every part and in the smallest; and that this Form exercises an effective influence on every one who receives Good and Truth from the Lord, and imparts the Human Form to every inhabitant of Heaven, according to the degree of his reception. It is owing to this that Heaven is similar to itself both in general and in particular ; and that the Human Form is that of the whole, of every Society and of every Angel, as shown in four Sections above. (From n. 59 to n. 86). To which may be made this addition: That the Human Form exists also in the Angels, in every minutia of Thought that is derived from celestial Love [the Primitive Unity]. But this arcanum can with difficulty come within the comprehension of any man, though it enters with clearness into the understanding of Angels, because they dwell in the light of Heaven." (1).
and Evenness, and echoes to them, as shown in Diagram 10. Figures 1 and 2.
898. Morphic Oddness or Inequism-Angulism, Triangulism, etc.-is the Reappearance, in Higher Stages or Degrees, of the Primitive Morphic Unism,-Punctism, Circlism, Globe-ism; and Morphic Evenness or Equism,-Pair-ing, Copulism, Measure by Comparison,-is the Reappearance, in Higher Stages or Degrees, of the Primitive Morphic DuismRectuliniism, Squarism, Cube-ism. InEqua-Equism or Equa-INEqUISM is the Combination of these two related series of ideas.
899. As the primitive Unism and Duism are the Spirits or Extracted Qualities of the Numbers One, (1), and Two, (2), and as Trinism is the Spirit of the Unition of the One and the Two, it results that the Number Three (3) returns to the function and idea of Unity. The One and the Tirmee are both Odd Numbers, while the Two differs from them both, totally, or as a Contrasted and Antagonistic Principle, from the fact that it belongs to, and is the Head of, the Even Series of Numbers. This is the reason of what has been already referred to as the Sympathy between the First and Third Degree of the Primitive Scale of Numerical Principles, Unism, Duism, and Trinism ; that is to say, of Unism and Trinism as contrasted conjointly with Duism. It was in consequence of this Sympathy that Love or Affection, which is Unismal among the general attributions of the Mind, was identified by Swedenborg with the Will, which is Trinismal; as already pointed out (c. 1, t. 139).
900. The Three (3) is therefore a One (1) of a higher order, from which there begins a new Series of Three Degrees overlapping with the Former, as the Tonic, which begins a higher Octave, ends also the lower Octave in Music. In other words, One is the first, and Three the second degree of the development of that generalized idea of Unity which appears as Oddness or Inequality.
901. The Four (4) holds the same relation to Two (2) which the Timee (3) holds to One (1); that is to say, it repeats it in
a second degree of that peculiar character which is here denominated the Second Power.
902. As the One, and the Two, and the Three, furnish the Universal Principles Unism, Duism, and Trinism, in a Primary Trigrade Numerical Development, so the Three and the Four, with their joint product Seven (\%), furnish as First Heads or Prima Capita, and, therefore, representatively, the Principles of Equism, (Equity), Inequism, (Inequity, Iniquity, Deviation, Inclination, Partiality, Favor), and Equainequism, the Combination and Compromise of the other Two in a Completeness of Structural Order and Arrangement. (Four, (4), for Equism = The Square; Three, (3), for Inequism $=$ The Triangle $;$ Seven, $(\mathbf{y})$, for Equa-inequism $=$ The Compound Figure resulting.)
903. The Morphic Analogues of One, Two, and Three are, as we have seen, omitting some minutix of discriminations, the Point, the Line, and the Angle or Triangle. The Morphic Analogues of the Four, the Three, and the Seven, are the Square, the Equilateral Triangle, and the House, Edifice, or Temple, with its Body and its Roof, as seen below. c. 1-7.

$$
\text { Diagram No. } 64
$$

Figure 1. EQUISM.




Figure 3. EQUA. INEQUISM,

7 or

Structural

Commentary, t. .20.3. 1. There is perhaps no idea upon which there has been such a persistent intuitional agreement among the pre-eminent writers of all ages and nations as that there is some recondite meaning which attaches

90t. Secondism repeats Duism, and we are here in a Secondary Series ol Development, which is in its character Duismal. This is the same as to say that it is Scientic and Logical. The Primitive or Natural Order is therefore here reversed which is the reason that the Morphic Analogue of Four occurs previousity to the Analogue of Three. All of these minute points of arrangement work out into points of importance in the ulterior development of the Science. They can only be glanced at here in passing, as caveats against the uninformed criticism of the tyro.
905. The Compass (Dividers) associates with the Circle. This-together with the Rule, the Square, the Triangle, and the Edifice or Temple, as that which is to be constructed or built, by the "Work" of the Order-again reminds us of the Symbolism of Masonry, as the Instinctual Stage of the Religion of Science, and of the Science of Morals ( $\mathbf{t} .770$ ).
906. The connection of the Terms Equism with Equity,
itself to certain numbers, and pre-eminently among these to the numbers Seren and Twelve (after the Prime Numbers of the first order One, Two, and Three): while at the same time there has never heretofore been a particle of Scientific proof, and hardly so much as grounds of probability, adduced in favor of the idea. None but the most fanciful reasons for it have ever been given.
2. The unanimity has nevertheless been almost equally great in respect to the precise meaning assigned to the number Seven. It has everywhere been held to mean that which is completed or filled out. The reason of this meaning is now rendered obrions, and is abundantly demenstrated in the text. As the sum of the Four and the Three, representing the Sccond Powers of the Principles of Unism and Duism, the Universal Principles of all Things, Seven is the Sccond Power in the Symbolic (not in the mathenatical sense) of Trinism; that is to say, it is the Representative of the Second Cmbination of the Representative Numbers, which embody the abstract Governing Principles of Being; and as Secondism repeats Duism, and as Duism is the Scientod One, anong the Three Primordial Principles, the number Seven comes, by Loyalty to the Dominint of the Doman, (the Scientific Domain), to attain to the Scientific predominance as representative of the adjustment, compromise, and harmony between the two opposing Principles, in that Composity or Trinism which is synonymous with finish, fullness, or completeness.
 hitiu ubjecting to one of the illustrations of Gesenius adds: "It arpears to us
and Inequism with Iniquity, which is Wrong Doing, or the Perversion (or Crooking) of Equity, shows at once that we are here in the presence of Moral Discriminations equally fundamental with the Metaphysical and Mathematical Discriminations under consideration, and that all the three Classes of Discriminations must be, in the nature of things, inherently, scientifically, and exactly, adjusted to each other.
907. Immense consequences result from what is involved in the preceding statement. We are now, for the first time, opening up the way to an Exact Science of Ethical and Social Phenomena. We are at the same time creating the Tools and Instruments, and discovering the Method, by which the Human Intellect can at length obtain a complete mastery over that Echo of Unity which connects, in harmony, the Lowest and the Highest, the most Exact and the most Inexact of the Domains of Being and Thought. It is not the place here, however, for expansions and applications. I am compelled to
possible to resolve all the other passages referred to by him and others into the idea of sufficiency, satisfaction, fullness, completeness, perfection, abundance," etc. To this he adds nearly a page of illustrations extracted from the Scriptures; as, "to punish seven times" (Lev. xxvi. : 24) "to punish completely." (1).
4. Swedenborg carries out this idea, as parit of his larger conception, that the whole of "the Word" (the Scriptures) conceals a Spiritual meaning transcend. ing the literal meaning. For its connection with the matter in the text, and also to give an illustration of this remarkable writer's method of interpreting the Scriptures, the following full extract is given, containing his leading exposition (not the only one) of the meaning of the number Seven.
5. "John to the seven churches," signifies, to all who are in the Christian world where the Word is-and by it, the Lord is known-and who accede to the church. By the seven churches are not to be understood seven churches," (numerically), "but all who are of the church in the Christian World; for numbers, in the Word, signify things, and seven, all things, and all, and thence, also, what is full and perfect, and it occurs in the Word, where anything holy is treated of, and, in an opposite sense, where it treats of anything profane; consequently this number involves what is holy, and, in an opposite sense, what is profane. The reason why numbers signify things, or rather resemble certain

[^82]make every effort to keep down for the present to the most rigorous, and, in a sense, even to the most meagre exposition of the Elements of the Fundamental Science of Universology itself, from which the new Science of Ethics and a crowd of other New and Related Sciences are ultimately to be developed.
908. Four is the Square of Two, and as such it is denominated the Second Power of Two. Eight is the Cube of Two, and this is denominated the Third Power. The terms Square and Cube apply therefore equally in respect to Number and in respect to Form. There is here, as said elsewhere, a testimony of exact Analogy between these two Domains so remarkable that it is surprising that it should not have suggestecl the idea of both a broader and more detailed Analogy which slould hold good throughout ( ).
909. Before proceeding further it will be convenient to attend to the Morphic Analogues of Calculation generally. We have previously seen it reduced to the two single operations of $A d$ -
adjectives to substantives denoting some quality in things, is, because number is, in itself, natural ; for natural thangs are determined by numbers, but spiritual things by things and their states (c. 2, t. 286) ; therefore, he who is ignorant of the signification of numbers in the Word, and especially in the Apoca lypse, must be ignorant of many arcana which are contained therem. Now, since seven signifies all things and everything, it may appear that by seven churches are meant all who are in the Christian World where the Word is, and where, consequently, the Lord is known: these, if they live according to the Lord's precepts in the Word, constitute the true church. For this reason the Sabbath was instituted on the seventh day, and the seventh year was culled the Sabbatharian year; and the seren times seventh year the jubilee, by which was signified eversthing holy in the church : for this cause, also, a week, in Daniel and elsewhere, signifies an entire period, from beginning to encl, and is predicated of the church. The same is signified by seren in the following passages : as, By the seren golden candlesticks, in the midst of which was one like unto the Son of Man (Apoc. i. 13). By the seven stars in his right hand (Apoc. 1. 16, 20). By the seren Spirits of God (Apoc. i. 4 ; ir. 5). By the seven lemps of fire (Apoc. iv. i5). By the secen angels to whom were given secen crimpets (Apoc. viii. 2). By the seren angels having the seren last plagues (Apoc. xvi. 1; xxi. 9). By the seren seals with which the book was sealed (Apoc. v. 1). In like manner in the following places: That thejr hands should be filled seren days (Exod. xxix. 35). That they should be sanctified
dition and Subtraction. These operations may be illustrated as between single Units, as follows:

Diagram No. 65.


SUBTRACTION, Duismal.
910. When to Addition and Subtraction operating perpendicularly or in a single column, there is joined the idea of the Addition of the whole column so situated to another column or other columns situated laterally to the first, this Compound
seven days (Exod. xxix. 37). That when they were consecrated they should go clothed in the holy garments seven days (Exod. xxix. 30). That they were not to go out of the door of the tabernacle seven days, when they were initiated into the priesthood (Levit. viii. 33, 34)."
6. "That an atonement was to be made seven times upon the horns of the altar (Levit. xvi. 18, 19). That the altar was to be sanctified with oil seven times (Levit. vii. 11). That the blood was to be sprinkled seven times before the veil (Levit. iv. 16, 17). And also seven times towards the east (Levit. xvi. 12-15). That the water of separation was to be sprinkled seven times towards the tabernacle (Numbers, xix. 4). That the passover was celebrated seven days; and unleavened bread was eaten seven days (Exod. xii. 15; Deut. xvi. 4-7). In like manner, that the Jews were to be punished seven times more for their sins (Levit. xxvi. 18, 21, 24, 28). Wherefore David saith, Render unto one neighbor sevenfold into their bosom (Psalm lxxix. 12)." Sevenfold is fully. Likewise in these places: "The words of Jehovah are pure words, as silver tried in a furnace of earth, purified seven times" (Psalm xii. 6). "The hungry ceased, so that the barren hath borne seven, and she that hath many children is waxed feeble" ( 1 Sam . ii. 5). The barren is the Churcin of the Gentiles, who had not the Word ; she that had many children is the Church of the Jews, who had the Word. "She who hath borne seven languisheth, she hath given up the ghost" (Jerem. xv. 9). In like manner, "They that dwell in the cities of Israel shall go forth and set on fire and burn the weapons, and

Addition is Multiplication ; and the corresponding counteroperation is a Compound Subtraction, which is Division (t. 000).
911. If the number of Units in each column multiplied be equal, and if the number of columns be equal to the number of Units in any single column, the kind of Multiplication which then ensues is called the Squaring of the Number contained in the single column. Figure 1 of the following Diagram exhibits the idea of the Numerical Square, and Figure 2, the corresponding idea of the Morphological or Geometrical Square :

Diagram No. 6 G.
Figure 1.
Figure 2.
NUMERICAL SQUARE.


## MORPHOLOGICAL SQUARE.



Addition, $1+1$, etc.; multiplication, $5 \times 5=25$.
912. If to the sheet of columns (summing up in the instance above as twenty-five) we then add a number of sheets equal
they shall burn them with fire sexen years: they shall bury Gog, and seven months shall they be cleansing the land" (Ezek. xxxix. 9, 12). "The unclean Spirit will take with him seven spirits more wicked than himself" (Matt. xii. 45). Profanation is here described, and by the seven spirits with which he would return, are signified all falses of evil ; thus a plenary or total extinction of goodness and truth. By the seren heads of the dragon, and the seven crowns upon his head, (Apoc. xii. 3), is signified the profanation of all goodness and truth. It is evident from what has been said, that seven involves what is holy or profane, and signifies all things and fullness" (1).
7. Among non-theological writers we have already seen the devotedness of Comte to the number seven (c. 1, t. 863). Fourier had the same; although his ideas dominated in the number Ticelve, with a pirotal addition of One. Comte, without this discrimination, fastened in some manner also upon the
to the number of columns in a single sheet superimposing one of these sheets surface-wise upon the other, we shall have the numerical Cube of five, (the number here chosen as basis), which is five times twenty-five or 125 . The Morphological Analogue of any Numerical Cube whatsoever is then a simple Geometrical Cube. This may be made analogous with any specific Numerical Cube by marking off the corresponding number of divisions upon its side, as feet or inches, for example, of measurement.
913. As the Point is the Analogue of any single Unit, so the Line with its measure-marks is the Analogue of the Numerical Column of Units ; the Square, divided as the Chess Board or Chequer Board, is the Analogue of the sheet of Columns, and Units within the columns of the Sums which is squared by Multiplication, and the Cubic Pile, as constituted of other and minor cubes, is the Analogue of the Numerical Cube.
914. We return now to the consideration of the Globe, the Cube, and the Egg as the Three First Heads of Concrete or Elaborated Form. As such they constitute a Department of Form which is pre-eminently illustrative of the Principles of Organization or Concrete Being ; the Globe of the Unism,
number Thirteen, as a governing number. See, upon the same subject, the writings of St. Pierre, Luke Burke's Mythonomy, and passim, throughout the whole body of literature. The number Nine is, as it were, only a more elaborate Seven-the mathematical or literal Second Power of Three, as Seven is symbolically so, by Abridgment-by Addition substituted for Multiplication. a. 1.

## Annotation, c. 1, t. 903.

The frame thereof (1) seemd partly cir- And twixt them both a quadrate was the culare, base,
And part triangulare; 0 worke divine! Proportioned equally by seven and nine; Those two the first and last proportions Nine was the circle sett in heaven's are; place:
The one imperfect, mortall, fœminine ; All which comparted made a goodly diaTh' other immortall, masculine ; pase (2).
the Cube of the Duism, (in a Third Power of ascension from the Elementary Duism of which the Analogue is the Straight Line), and the Egg as the Trinism of this Concrete Domain.
015. The Globe Figure is then itself the Analogue of a Third Powr-in a new analogical sense-of Unism in the Primary or Incipient Development of the Principle. The Stages here are, the Ponnt as Basis (or First Power) ; the Circular Surface as the Second Power; and the Solidity of tire Globe as the Third Power. All these are Naturoid. They are successive elevations of the general idea of Roundness and of Naturism, answering to the Line, the Square Surface, and the Cube for the corresponding Degrees or Powers of Straightness, and hence of Scientism. The Ovoidule or Egg-shaped Atom or Germ, the Ovoid Surface (Membranoid), and the Solid Ovord, are the corresponding Degrees or Powers of the Trinism (Artoid within Nature) of this Series as exhibited below.

916. The reigning Compound Series of Morphic Discriminations, such as prevails already in Science, is derived from the Middle Column of the above Diagram-Scientoid-subsuming
as a Basis, and resting upon the Point, taken from the First Column-Naturoid. The Rule, the Square, and the Cube have been instinctively recognized, although never explicitly stated, as having relation to Exactitude ; and Exactitude is the Spirit of Science.
917. The following Diagram will again exhibit this reigning Series of Geometrical Discriminations now raised numerically through a Series of Four Degrees,-borrowing for the purpose the mere, Point, as Least Element from the Naturoid Series of the preceding Diagram :

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Diagram No. 68.
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4. 



Solidity.—Solidismcs.

Surface.-Superficismut, Surfacismus.
2.

1.

Line.-Linitismus.

Polint.-Punctismus.
918. We have hitherto, for the most part, considered the Point as the Analogue of the Unit, and hence as related to Number. But Form itself has, as may be inferred from the Diagram, one fourth of its entirety represented by the Point. This is Form as constituted of mere points irrespective of lines,
surfaces, or solids. This I have denominated the Punctismus of Form, and to this we have already given our attention. It is that department of Form which is well illustrated by the Stars as they stand scattered in the Firmament, or by the Stipple Work of the Painter, which is a mere aggregation of Pointsthe indiridual Points repeating, of course, the Units of Number. So far as this, it has been previously described and illustrated (t. 603-607).
919. But further than this, the Punctismus of Form is not so simple as not to admit an exceedingly important subdivision. It has three Grand Departments, as follows: 1. Posrtion, of which the Type is the Single Point; 2. Distance, of which the Type is Two Points at some degree of remoteness from each other ; and 3. Situation, or Relative Position, of which the Type is Three Points (usually) adjusted equidistantly by Tendency to Equation. The composition of this last is Position plus Distance.
920. The next Grand Department of Form, in this reigning Series of the Departments of Form, is Lineation or Limitation Proper,-or, as a Department, the Limitation of Form,-of which the Type is the Line. This undergoes a similar Threefold Division, into 1. Rectism, of which the Type is the Straight Line ; 2. Angulism, the Type of which is the Broken Line or Angle; and 3. Curvisir, or an infinite Series of Angles brought into reguloidism which is here representative of the Principle of Rectism in combination with Angulism.
921. The Third Grand Division of Form of this Order is Surfacism-Apparitional, Phenomenal. Of this the threefold distribution gives: 1. Segmentism, of which the Typical Representative is the Square ; 2. Sectorism, Typically represented by the Equilateral Triangle ; and 3. Circlism, of which the Type is the Circle, as to its surface or face.
922. The Fourth of these important Divisions of Form is Solidism or Solidity, which subdivides into 1. Cube-ism, as the Grand Concrete Type of Rergularity ; 2. Pyramidism, or

Solid Angulism ; 3. Globism, the Grand Type of Solid Rotundity and of Concrete Entity or Thing.
923. The Diagram below will exhibit these several Subdivisions of the Domain of Form in their ascending order of




Commentary, t. 923. 1. The immense significance and importance of these Morphic Discriminations will gradually open to the Mind of the student of Universology. It is not mercly nor mainly as developing a new and im-
increasing complexity from the Point up to the Cube, if we begin the numbering in the margin, and rise to the top of the Table. Otherwise, if we descend in the ordinary manner of reading a page of printed matter, we have the reverse order of decreasing Complexity, from Globe to Atom and Point ; from Concrete and Corporeal to Abstract and Elementary. (The reader should not forget that the Tables and Diagrams are usually to be read upwards. The Analogies, in the Left Margin, with the Constituents of Literary Matter, will aid the Understanding of the Subject; so of the few suggestive terms in Parentheses, on the Right, relating mostly to Ethical Considerations.)
924. In the Fourth and Highest of these Typical Classes of Form,-and, then, in all the others by Echo or Correspondence, -different classes of effects are produced by different modes of combining the Subdivisional Factors of the Department. For example, the Cube as Body, and the Pyramd -which may be rounded by Artistic Modification into the Dome as Roof or Surmounting Addition,-furnish, conjointly, the Architectural Type, -that of the House, Palace, or Temple, the Residence of the Animal or the Man, of the King, and of the God, respectively. The Cube and the Globe Figures, com-
mense Science of Morphology as such, that their value is to be considered. A part from, and altogether paramount to, this direct and immediate value, is that of these same Forms as Hieroglyphs and Symbols of Corresponding Principles and Lacs developing in a Corresponding gradation of Complexity, and prescribing or governing the distribution,-in precise Correspondence uith these Forms, of all the Departments and all the Details within all the Departments of Being. This irlea is repeatedly insisted upon in the present work, because it will often require a new mental training to bring the mind unaccustomed to the subject completely 1 uto the ability to seize the meaning of the statement. As it is the Scientific point of view we are now occupying, and as Science holds the same goversicc relation to all clse in the Unicerse achich the Straight Lines and Right Angles of Geometry hold to the less regular forms presented by Nature and Art, it is this Geometrical Variety of Form which is properly denominated Positive, or, in other words, Paramount and Gorerning in the Domain of Form.
bined by interblending, furnish the Type, as previously shown, (Dia. 47, t. 775), of the Egg, the Embryo and Vital Representative of the Animal, the Human, or the Divine, Inhabitant of the Edifice, or Tabernacle, or Dwelling-Place. The intervening Pyramid, as Scala, or Scale, or Staircase, the Graduated Ascension from a Base, like that of the Cone, to a point as its Apex, or of Descent, as from the Apex to the Base of a Cone ; or from the Centre of a Globe to a Plane cutting its Surface as Base,-is representative of the State, or Career of Development, of the Individual or Race through a Hierarchy of Rank, from the dust of the earth and the worm, up to the Supreme Central Type of Perfection. This in the Natural Order of Evolution coincides with the Ascension of the Staircase; the Logical Order finds its Analogy in the Counter-direction to that of Descent ( $\mathbf{t} .6$ ).
925. Edifice, Tent, Tabernacle, Shrine or Arena; the Divinity or Inhabitant occupying the Shrine; and the Career of Achievement, Dignity, and Rank,-are thus Three Grand Aspects of the Development of all Being, so symbolized by the Morphic Combinations here brought into view. The term Hierarchy, which means, literally, no more than a Priestly Order of Government, has been adopted and expanded to mean, in Sociological parlance, and then as a Technicality of Universology, any Scheme or Scale of Ascending, Descending, and Correlated Dignities and Ranks, as that of the Inferior and Superior Officers in an Army or the State; and so even with reference to Inferior and Superior Orders of Development in any Department of Nature or in any Plan of Organization whatsoever.
926. But it remains now to be stated, that all that is exhibited in the preceding Diagram is a mere Abstract from the real Exhaustive Scheme of the Basic Distribution of the Grand Domain of Form, (the Morphismus). The following schedule will intimate the Method and Scope of the larger and truly Universological Distribution, which in subsequent works
of Detail, may and will be carried out with exactitude and minuteness into all its rarious brancles :

1. The Unismus of Form, (or, technically, of the Morphismus), is The Porvt with its Varieties and Modifications, (for even the Point is by Metaphysical Analysis capable of Infinite Variety), -the Point standing representatively for the entire Punctismus of the Morphismus ( t . 603-607).
2. The Duismus of Fora is The Line representative of the Liniismus of the Morphismus (t. 603). These two are the Elementismus of Form.
3. The Trinismus of Form is Elaborate Form which bifureates into 1. Solid Form ; and, 2. Superlicial Form or Surface Form (t. 538).
4. Dismissing for the present the Unismus and the Trinismus in the Scale, let us pursue the distribution of the Duismus or Liniismus of Form.
5. The Unisurus or-substituting the Principle for the Domain, we will now say-the Unisur of Form is The Straight Line; 2. The Duisn of the Line is The Broken or Defracted Line; and, 3. The Trinism of the Line is Tire Curre, which involves the Principle of the Angle or Break in its Continuous Deviation from Straightness, and involves the Principle of Straightness by the Regularity (or Reguloidness, t .520 ) of the Curvature ( $\mathrm{t} .517,518$ ). It appears now that the Exhibit made in Dia. No. 13, t. 533, is also no more than an Abstract of this more ample Distribution.
6. Dismissing the Unism and Duism, let us pursue the Trinism of this last Scale.
7. The Uxism of the Curve is The Cuive of Single Curvature; 2. The Duism of the Curve is Tife Curve of Double Curvature; and, 3. The Trinism of the Curve is The Spiral, which in the respect in which it differs from the Ielix, is properly a Curve of Triple Curvature ( t .637 ).
8. Dismissing, in this instance, the Second and the Third Branch of the Distribution, let us pursue the Subdivisions of
the Curve of Single Curvature ; that is to say, of the Curve which lies wholly in the Same Plane.
9. The Uifisif of the Curve of Single Curvature is the Simple or Circuloid Curve, or, in other words, the Arc of a Circle ; 2. The Duisin of this Curve is the Serpentine or Hogarth's Line of Beauty, which also subsumes the Rectism of the Straight Line, and is itself, therefore, at the same time, a Trinism relatively to that more radical connection (t. 520) ; while yet in respect to mere Curvature it is Duismal, involving doubleness, on the one hand, and converseness, on the other, of Simple Curvation; 3dly and finally, The Trinism of the Curve of Single Curvature ascends still higher than Hogarth's Line into the Realm of Art and Beauty. It is the Simple or Circuloid Curve adjoined as a Head to the Serpentine as a Trunk or Trail, precisely as the Point adjoined as Head to the Line as Trunk produces The Anthropoidule, or as Head adjoined to Trunk produces TheAnthropoid, (t. 881), which is representative of Anthropomorphism, universally. This pre-eminently artistic Compound Line of Beauty, the Nature and Elements of which have not, as I am aware, been previously defined, is farorably illustrated in the Outline of the Neck and Back conjointly of the Arabian Horse and other

> Diagram No. 70 .
> Trinism of the Curve of Simple Curvature.

high-blooded Horses. The Arch of the Neck is the Arc of a Circle, and the Head of the Compound Curve in question. This declines into the Serpentine of the Back and Croup which is the Trunk or Trail of the Curve. The accompanying Diagram
completes the illustration. The Principle of Artistic Modificatron ( $\mathbf{t}$. 515) intervenes to modify the Theoretical Elements of the Curve. The Curve abuts on the Straight Line which represents the Head of the Horse.
930. The Elementary character of the present work forbids to do more than merely to open up this immense field of Scientific investigation ; the Exhaustive Scientific Distribution of the Elements and Infinitive Varieties of Naturic, Scientic, and Artistic Form. I must not dismiss the Subject, however, after this mere initiation, without especially emphasizing the fact that, if this immense Distribution were completed, it would constitute no more than the Science of INorphology as elaborated fron tife Principles of Universology. It would still not be Universology itself, which is something yet vastly greater in Character and Scope than all this. Universology in respect to Form treats not of the Forms as sucir, but of tie Meaning or Significance of the Forms, typicaliy, or as they есно то Corresponding Developments of Number, of Metaphysical or Logical and Moral Principles, of Sociological Principles, and the like, throughout every Department of Being. It is the Comparology of all these through the aid of Typical Forms as Patterns or Normal Ideas which constitutes it the Science of Universology. Every Variety, Element, and Aspect of Formi, in time uthost Infinity of its possible Development, is tile Type, Symbol, or Hieroglypit of a precisely Corresponding Princtple in every Sphere and Department of tie Entire Universe. The Explicated and Systematized Knowledge of al? this pertains to, and is again, the Science of Universology itself ( $\mathrm{t} .3,59,70,136,137,153,159,165,183,443,835$ ).
931. The Free-Mason has instinctually wrought symbolically at the construction of the Temple ; the far-reaching genius of Fourier saw all Humanity, in the coming Age of High Harmony, as Phalanxes of Consociated Individuals Collectively inhabiting Innumerable Magnificent Palaces; and the vision.
of the Seer of Patmos, more poetically inspired than all others, discerned the beatific Structure of Human Society in the Future, as both an Edifice and a City descending out of Heaven, and having the dimensions of a regular Architectural Plan (a. 54, t. 204, 286, 287, 423, 425; c. 1-3, t. 453, 587, 903, (Dia. 9), 905, 909, 922, 924, 948, 1015-1030).
932. The Point is the Analogue of Position, or of the Positing of our Thought; it may be merely in blank space, or in imagination even; so that it converges upon, and occupies, as it were, one Centre or Place, as when we attend to anything whatsoever ; whence it also happens that the Point is representative of a Unit, Entity, or Single Instance of Being, and hence of Thing, Object, or Individual. But it is Pure Thing or Object, irrespective of any quality, property, attribute, or relation other than this one of Position itself. Such is the Process of Thinging and Thinking; that is to say, of Individualizing, in Pure Reality or in mere Thought. It is this which the intelligent Phrenologist means by the action of the Organ of Individuality, which he locates directly on the Mid or Median Line of the Forehead, slightly above the root of the Nose. The Natural Language of this organ, he would inform us, is the knitting of the brow, when we attend, externally. In the action of this Organ is the Incipiency of all Intellectual Function; the Point being in respect to it, as in respect to External Form, the Starting-point and Least Element of Distinction, prior even to Delineation (De-LiN-eation).
933. Immediately below this point in the Brow, and to the right and left along the superciliary ridge or eyebrow, the Phrenologist again locates a series of mental faculties which collectively he denominates Perception, or the Perceptive Organs of the Head. Perception means collection or gathering together, and primarily of Points, as constituting Lines, Surfaces, etc. In French they say, the perception of rents, in the same sense as in English we speak of the collection of money or debts. The first stage in the Collectiveness of Points is the

Category of Distance, which is denoted elementarily, as shown in the Diagram, by Two Points, which must of course be collected in the thought, or perceived conjointly, while yet they remain distant, (Lat. di, stans, standing asunder), in order that we have an apprehension of Distance. Buchanan, in singular accordance with this idea, adds to the Ordinary List of the Organs of Perception a Phrenological Organ of "Distance" at the side of the root of the nose, and adjoining the better recognized Organ of "Form."
934. The Two-Points are, as I have said and repeated, the Universal Analogue of Distance ; as the Three-Points are so of Situation, which last is Distance in comnection with Position or mere Centre. Then comes the Line, which is the type of Lineation ; and Lineation or De-lineation is Form proper, or Figure, or Outline. The phrenological Organ of "Form" is placed inmost along the Brow, or contiguous to the side of the root of the Nose. That of Situation I shall account for elsewhere.
935. Then comes Surface. This is represented by Color, as the basis of superficial or Surface-wise Phenomenality or A ppearance. The phrenological Organ of "Color," if located in strict accordance with this occult truth, would occur next outwardly along the Brow, but, by a subtle operation of the dance of positions which reverses the Abstract in the Concrete, and which has reversed the rclative positions of Distance and Form, it occurs actually further out than the Organ of "Weight." Buchanan interposes in the same group, but lower down, between the angle of the eye and the nose, an Organ of "Size." This is only the Globose aspect of Form, and seems related to Space, and to the Organ which other phrenologists have located above the superciliary ridge, and have denominated " Locality."
936. The Organ of "Weight" then comes in as representative of Solidity, the next of these Morphic Degrees above Surface. Solids and Ponderables are basically related to each
other, not that Solids are the only bodies which are ponderable, but that the given body in its solid consistency is proportionally more ponderous than it is in its liquid and gaseous state.
937. All these Discriminations and Groupings of these phrenological Organs have been made, hitherto, in a purely empirical way, that is to say, guided by no other Principle than Observation; and yet the reader, I think, cannot fail to be struck by their general coincidence with the proper results of that radical analysis above instituted, Universologically, and which concerns the Point, the Line, the Surface, and the Solid.
938. We have now exhausted, in this comparison, what is contained in the fourfold discrimination of the preceding Diagram ; but as yet we have only partially exhausted the Organs of Perception, which the phrenologists have located along the Brow. I have mentioned the Organ of "Size" supplied by Buchanan, and its natural association with "Locality" and hence with Space. He also locates at the outer side of the eye an Organ of "Force;" that is to say, of the Perception of Force or Dynamic Phenomena. This is at the base, in like manner, of the sense of Time, which word he also employs as the name of an Organ above this one, and above the superciliary ridge, and by the side of that which the other phrenologists have denominated "Locality" (-Space).
939. Let us now substitute, for our present purpose, the names Extension and Protension for these Organs of Size or Locality and Force, and we have at once the Spacic Idea and that of The Urgency forward in Time as a Current of Events, with which-coupled with each other as the joint Negative Ground of all Being-the Universological student is now already familiar (t. 9). Space and Time are, in other words, the Negative Containers of that Solidity which has as its single analytical elements, Points, Lines, and Surfaces.
940. Finally, "Order" and "Calculation" finish out, as

Phrenological Organs, the range of Perceptive Organs, if we except "Music" and "Language," which being something more than mere Perception, are placed, both of them, by Buchanan at the outer angle of the Brow. These will be noticed presently (t. 943).
941. "Order" is the Seriality or Ordinality, and "Calcula. tion " is the Grouping, Summation, or Cardinality with which the reader or student has been rendered already familiar (Dia. No. 45, t. 670).
942. It appears then that the four attributions of Form contained in the Diagram-Point, Line, Surface, and Solidare still of a partial character in this, that they are Entical and Unismal, or such as relate mainly to the one object ; and that there is another Variety of Form which corresponds to them as Negatoid, Relational, and Duismal, or such as concerns in preponderance Various Objects in their Co-ordination with each other. Space and True coincide with the Unismal Order of these Discriminations ; Grours and Series with the Duismal.
943. Finally, the Trinismal Combination of both classes of these properties and conditions of Form,-Entical and Relational, -and of the Laws of Movement as measured by Form, constitutes Harmony ; and Harmony, when expressed in Language or Sound, is Music. The phrenologists have then, in striking accordance with these deep analytical discriminations, located the organ of "Music" at the termination, or, as it were, at the head of the Series of Organs which we have been investigating, just beyond the outer angle of the Brow. Here also Buchanan places the Organ of "Language," and also a distinct Organ of "Sound," while former phrenologists have located the Organ of "Language" farther forward, in the Perceptive Range, and back, as it were, of the eye itself.

944 . It is proper here to observe that Buchanan, who is the discoverer of Psychometry and Psycho-Neurology, and almost the Founder of Monanthropology, has corrected the Gallian System of Phrenology, and adranced the knowledge of it very
greatly by partially abandoning mere Cranioscopy, or "the Reading of Bumps," and substituting, in a great measure, the Psycho-Neurological method, that of "Magnetizing" the different organs or localities of the Head, and observing the mental manifestations which are, in sensitive subjects, regularly evoked by that process.
945. But the method of Buchanan in Phrenology, like that of his predecessor Gall, is still merely empirical, observational, or inductive. Universology will revolutionize Phrenology and Monanthropology, by introducing a totally new element, Analytical and Scientismal; one which will be to the mental Geography of the Brain and Head, and, in a secondary sense, to that of the Trunk or Whole Body also, what Scientific Geography is to the mere Naturismal Knowledges of the traveller, who observes and classifies his observations with no knowledge of any equator or poles of the Earth, and consequently with none of any degrees of Latitude and Longitude, nor of any mathematical method of determining distances, climate, etc.
946. Universological Phrenology begins at the opposite end from merely observational investigation by any of the methods, and determines, a priori, the Design, so to spea7, of Nature in the Mathematical Outlay of the Head. The mental manifestations associated with different localities are then merely the natural climatic influences, so to speak, properly to be anticipated, analogically, from the mathematical relation of the parts.
947. This new Scientismology of Phrenology does not dispense with the Naturismology which is Observational, any more than the scientific outlay of the blank Globe, by its lines of latitude and longitude, dispenses with the insertion of the natural features of the land and water. It only correlates, measures, and governs them, and furnishes a new method of rapidly attaining to a higher and distinctly different understanding of the Subject. What this new a priori and pure or transcendental scientific element thus effects for Phreno-
logy, it also effects in similar degree For all of tire Empricical or Inductive Sciences. It will also furnish a sufficient and satisfactory answer to the criticism upon Phrenology from the side of the Physiologists, including the otherwise very damaging assault upon the Gallian System made by Sir Wm. Hamilton. (1).
948. If now, recurring to Point, Line, Surface, and Solid, we omit the Point, which we have previously borrowed, as it were, from the Naturismus as a basis, we retain the three Scientismal degrees, the Line, Surface, and Solid. These correspond with the three dimensions, Length, Breadtif and Thickth, (thickness), Elemeuts of Form and Being which will figure very largely in the ulterior exposition of Uuiversology. They in turn correspond with the Length, the Breadth, and the Height of the Celestial City as seen by John the Revelator, which were equal, and each ticelve thousand furlongs in extension (a. 54, t. 204, 274, 276, 424, c. t. 453). Equality is the Basic Idea of all Science, and Twelre is the highest or most developed and elaborate of "the Sacred Numbers" of which One, (1), Three, (3), with the Subdominance oif Four, (4), and Seven, (7), with a Subdominant Five, (5), are the Elementary Factors (c. 8, t. 503). These are the numbers which predominate in Music. One is the Tonic, representative of Unison, Seven fills the Octare as Diatonic, which by the intercalation of Five semi-tones carries us up to the Twelve Chromatic Notes or Tones, and completes the Scale. There are three Plenary Chords within the Octave, with an ambiguous admission of a Fourth as the Tonic of the Octare above. A similar overlapping carries the Seven up to Eight, and the Twelve to Thirteen.
949. Music is Harmony in the large and inclusive, not in narrow and technical sense of the term. Music is, according to Fourier, the only one of the Harmonies of Nature which has

[^83]been hitherto discovered. According to him also, the Passions or Motor Forces of the Human Soul are-and by a higher echo of the same analogy, the normal Groupings and Seriation of Individuals in a Harmonic Society, such as it is the destiny of man to enjoy on earth, are to be-distributed in exact echo to the Musical Law.
950. This Series of Numbers 13 (4) 57 (8) 12 (13) with some complications and additions among the higher numbers, including especially the number 32, constitute what Fourier furnishes us, with little more of proof than what is found in the relation of these Numbers to Music, as the Pivotal Numbers of all the Higher Harmonies in the Distributions of Nature, and as the guide for our own Construction and artistic effects in the Harmonic Reorganization of Society (c. 8, t. 503).
951. There is a striking validity in the Semi-Scientific intuitions of Fourier which the graver and more positive method of Universology will vindicate, rectify, and enlarge. It is true that "the Law of the Series distributes the Harmonies;" but the particular Series of Numbers here brought into view, as a Series of Pivots or Governing Numbers, is but a fragment of the subject, and has had hitherto no positive or scientific basis on which to rest. This subject will be resumed elsewhere in a new connection, and will begin to be placed upon a more satisfactory basis (t. 1028, 1029, 1031-1033).
952. The remainder of this Chapter will be Transitional from Abstract Form to the Actual Cosmos, from the Basic Outline to the Structural Outline of Universology. It will be also in a measure miscellaneous, owing to the exigency for abridgment in this elementary work. It will first complete the consideration of Form by introducing its higher and final distributions. It will then treat of Direction, as a Superior Department of Limitation (or of Form in the larger sense) to mere Figure or Form (in the minor sense). It will then conclude with a cursory consideration of Arto-Philosophy which has as yet so little development, and for which we are so little
prepared at present that it is not necessary to assign to it a separate chapter.
953. The Globe, the Cube, and the Egg were shown, in what precedes to be in a certain sense the First Heads of Form. It has appeared, however, also, that they are elementary of concrete Organization only, and that there are More Analytical Elements of Form below them and from which they are derived ; namely, the Pornt and Crrcle-Surface below the Globe, the Straight Line and the Square below the Cube, etc.
954. It is now to be observed that each of these Heads of Form, whether Concrete or Abstract, has a Trunk, Train, or Ulterior Backlying Extension or Succession of Form, corresponding to, and depending from it as Head. The Point, for example, has its Line or Series of Points, or the two combined, and so of the Circle and Globe, which furnish a ribbon-like
$$
\text { Diagram No. } 71
$$

Natural Order.

or cylinder-like extension. This Continuation may then be broken into successive disconnected or connected Circles or Globes ; so of the Cube, which furnishes the Prism or Series of Cubes. The accompanying Diagram will give a sufficient idea
of these discriminations, and will contribute thus farther to fix the conception of the Head Types of Form, as First Heads or Prima Capita; and as, therefore, typical of Principles of Being, as distinguished from the extension of Principles into the domain of their Consequences, or the successive applications in the continuity of their operation. Principles are again Cardinal and Spacic, as contrasted with Continuity of Operation, which is Ordinal and Tempic (c. 5, t. 9).
955. Princtples are Cautses, and Sequences or Consequences are Effects. Natural Causes lie below and back of their Consequences, and push them outwards and upwards into existence. The operation is a tergo or from behind and below. It is the push, as contrasted with the pull (t. 622). The Natural Causation of the Man lies accordantly in the Loins of his Father, or of his Ancestors. The Pelvis is the Counter-Head of the Skeleton, in which is placed, or to which is appended, this natural causation of the Man in his development in time. The Natural Order is primarily from below, upwards.
956. Logical Causes lie above and before their Consequences, and draw or pull the Chain of their Effects after them ; or they act reflectively upon the natural train of events. The operation is a fronte or from above and before. The Domain of Logical Causation, or Reasoning is therefore the Head of the Man, which leads the Body, or else acts reflectively upon and through it, by a counter-push or exertion to the primitive push of the Natural Order. The Brain, the Organ within the Head specifically entrusted with this Logical or Reflective Causation, is lodged in the Skull as the counter-pivot of the Pelvis and the Loins below. Intervening between these two Pivots or Heads of the Skeleton, there are then placed in the construction of the spinal column of man twenty-four vertebræ, or little skulls or pelvises. The measuring number is twelve,- the ruling sacred number of Structure or Construction, -but this is repeated by the conjoining, end to end, of the
two series ; the natural series of twelve, with the Pelvis as its Head below, and the logical or rational series of twelve, with its Head above it.
957. The Skeleton is the framework, or form-giving department of the Body, that which is therefore pre-eminently typical of Type Forms, or of Architectural Plan, in the Primitive Outlay of the Body. Christ explained, when he had affirmed, "If the Jews destroyed this Temple, he would rebuild it in three days," that he spoke of the "Temple of his Body." (t. ).
958. These important considerations are merely glanced at here, and must not be expanded. They will be resuned elsewhere. The accompanying Diagram will, however, exhibit the

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Diagram No.72.
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Figure 1.
Primitive Type.

Figure 2.
Artistically Modified Type.


Figure 3.
Occult Presence of the Egg Form.

Typical, and, so to speak, Primitive Mode of the Successive Combination of the Globe- and Cube-Figures, in the Construction of any portion of the Vertebral Column. Even the dupli-
cated Egg-Figure is not wanting (Fig. 3). Surfaces are substituted representatively for the Solids.
959. The point now of importance is to furnish a clear perception to the reader of the fact that the Globe, the Cube, and the Egg-Figure correspond typically with the Domain of Beginnings and Ends, or of Incipient and Final, or of Natural and Rational Causes, in the Universe of Being at Large ; which Domain afterwards reappears, or is reproduced in the Trains of Consequences resulting from those Causes, which have in them still the Primitive Causes, by echo or correspondence. Hence Philosophy, whether Natural or Scientific, may in preponderance dispense with the consideration of the Effects in detail, whenever it can arrive at the knowledge of Causes ; or, what is the same thing, of Principles, as the Fountains or Starting-points of Laws, which going out from those Principles, as rays from a centre, permeate, (more properly trans-pierce), and distribute all the particulars of Being.
960. Natural Causes are related to the Pelvis and to the Natural Seat or Fundamentum of the Body, and Rational Causes to the Brain, Skull, and Head. Embryology, the processes of which proceed within the Pelvis, is, in like manner, as Agassiz has discovered and proven, an epitome of the total physiological development in its largest career, that is to say, of the whole Animal Kingdom, as an Organismus ; and the Head, Skull, and Brain, as investigated by Phrenology, are representative of the corresponding Monanthropological distribution of the Trunk or the entire Body. Natural Causes thus ascend from the Trunk to the Head for their Domain of Effects, and Rational Causes descend from the Head to the Trunk for their Domain of Effects. This last is also what Swedeuborg means when he affirms that Principles reside in the Brains, and that Principiates (Things effected by Principles or preceding from them) reside in the Body (or Trunk). (1).
(1) Dirina Love and Wisdom, No. 000.

Buchanan has bestowed the name Sarcognomy upon this Secondary Distribution of the Torso and Limbs into Regions responsive to Correspondential Regions in the Phrenological Distribution of the Head (t. 5).
961. We may, therefore, then, for the most part, dismiss the direct consideration of the Trains or Trails of Form, which depend upon the respective Head Forms, and confine our attention to the Head Forms themselves. This dismissal refers, lowever, more largely to Free or Unmeasured Series of Succession. There are certain Measured Series which assume an importance only second to that of the Head Forms themselves (t. 1032). These, indleed, as Head Forms of a new order, institute a New Order of Form more complex than the simple Head Forms and the Trains-of-Consequence-Forms which are dependent on them. They are, in other words, the Heads of a New Order of Morphic Trains or Consequence-Forms equal to, or exceeding in importance, those hitherto considered.
902. To aid the understanding of what is meant in the preceding paragraph, the observation should now be made, that the Simple Head Forms, namely, the Globe, the Cube, and the Egg Form, relate primarily and in preponderance to Cosmical Phenomena, (the World), as distinguished from Anthropical Phenomena, (Man), which last is a higher and more complex Domain as slown by the Typical Tableau of Existence (Dia, No. 2, t. 41).

903 . It has been shown already that the Globe, the Cuke, and the Erg Form all concur in the conception, which, by the Laws of Thought, we render to ourselves of the shape of the Entire Universe ; and, in a minor sense, of the single world which we inhabit (t. 790). Cosmical or World-like ideas are, therefore, those orer which these Simple or Elementary Head Forms symbolically preside. In other words, this is the Basic and Elementary Domain of Concrete or Constructive Form which we may also denominate Ovarian (Eggish or Egg-like); as the Cosmos or World is to Man, wohat the proper Egg, that
is to say, the Yolk, is to the Embryo, namely, a Basis and Fountain of Sustenance, from which he derives his life and its means of enlargement and growth.
964. Anthropic or Man Form is, therefore, Embryotic or Germ Form, as contrasted with Cosmic or World Form, which is Ovarian or Egg Form. The World is an Egg, and Man is the Chick germinating from it, analogically or correspondentially speaking.
965. We thus pass up to the consideration of Anthropic Form, or to that variety of Form which repeats the Human Figure, and which is the higher department of Head Forms just alluded to. (This has concealed within itself a subordinate measured Series of Train-like or Successional Form

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Diagram No.73.
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Figure 1.
Single Integral. Fractional or Sectionoid. Sunnative or Grootpial.
The Individual. The Parts and Members. The Family.

-the Vertebræ). All this will be better understood by introducing at once a Diagram giving the several varieties of this new Department of Head Forms, explaining subsequently their Anthropological Analogies
960. Figure 1 of the Diagram denotes simply Man, as he appears when externally inspected, and considered merely with reference to the general fact that the Form of the Body is in some sense analogically related to the Function of the Mind. This Figure is therefore correspondential with that Domain of Being, which furnishes the Science of Monanthropology, the leading Branch of which is Phrenology, the relations of which to Universology have been already in part explained (see Index w. Monanthropology). In part, they will be resumed and treated of more extensively in the Structural Outline and elsewhere.
967. Figure 2 of the Diagram represents the Human Body, as sectionized or cut into quarters; this degree of Subdivision as representative of all further anatomizing. This corresponds then with the Subjective or Interior treatment of the Body, and therefore with Anatomy and Physiology, as branches of the Science which is also called Physiology, in the larger sense, and sometimes also Biology, and which is usually associated with the Medical Science of Man as hitherto ordinarily understood. (c. 2, t. 5.)
965. By a still further echo of Analogy, this Figure is also the Type of the Domain of Psychology or the Science of the Soul as subjectively studied ; for it is one of the most striking and important revelations of Universology, by tire Typrcal Reproduction of tire Subjective in time Objective World, (t. 379), that the Structure of the Nind exactly repeats the Structure of the Body, Member for Member, System for System, and Tissue for Tissue, down to the least Fibre and Cell of the Compound Being. Every Science, therefore, which relates to the Body has a corresponding Science which relates to the Mind, and the same Symbol is alike applicable to both, (and, so also, the same word, in the new Language, Alwato, with a mere change of Prefix.)
969. What Figure 1 is therefore to the Exterior Inspection of the Body, and the Objective Study of Mind-Phreno-
logical-Figure 2 is to the Interior Anatomy, Analysis, and Functions of the Body, and to the Subjective Study of MindPsychological.
970. Figure 3 of the Diagram represents The Family Group-the Man and the Woman as Parents, the Boy and the Girl as Son and Daughter, and the Baby or Infant in the arms of the Mother, as the pivot or nodus of the Unity of the Family.
971. The Family Group is the Individual or Lowest Constituent Element, the Atom, as it were, or Primary Cell of that Department of Being which we call Collective Humanity, and which furnishes the Science of Sociology, of which it is, therefore, representative. It is, in other words, the Primary Cell of the Social Organismus, or the Least Constituent Element of the "Grand Man" of Swedenborg, "Le Grand Etre" of Comte, the "Social Harmony" of Fourier, the "Social Organism" of Spencer, and of "The Church" the Elected, Regenerated, and Purified Humanity, which is to be, according to the Revelation of John, the Glorified Bride of the Lord.
972. It will be observed that the Internal Sectionizing or Quartering of the Body, in Figure 2, repeats the External Class Separation of the Individuals of the Group in Figure 3, exactly as the Internal Sectionizing into Fractions of the Single Unit repeats the Addition of Integers or of Whole-Number-Units which constitute the corresponding Sum. Physiology and Psychology are, accordingly, the Subjective, and Socrology the Objective Science of Man. Monanthropology is then the Intermediative and Translative Department between these two, relating and interpreting them to each other, precisely as the Single and Central Unit stands related to the World of Fractions interior to itself, on the one hand, and to the outer World of Integers upwards and onwards to infinity, on the other. It is, therefore, a Central and Typical Domain of the Total Science of Anthropology.
973. The ulterior and final applications and importance of these abstruse indications can only be glanced at here.
974. The Right and Left Sides of the Body, Figure 2, repeat the Male and Female Sides of Society, represented by the Man and the Boy on the one hand, and by the Woman and the Girl, on the other hand, in Figure 3.
975. The Head of the single Figure (Figure 2) repeats the Infant Child of Figure 3, the child recently a fatus, repeating the ooum or egg, in a higher stage merely of decelopment. These represent, in turn, Logical and Scientific Principles, or Reason, or Mind, for the Head, and Natural Principles of Germination and Growth, for the Infant Child. The Head is, therefore, in an especial sense, the Type and Representative of Science and of Mind, and hence of the Domain of Psychology, while the Truyk or Body Proper of the single individual is the Type and Representative of Nature, of Matter, and hence of the Domain of Physiology; Psychology and Physiology both being united, as we have previously seen under the symbolism of the Single Human Body anatomized for interior or subjective inspection;-Figure 2.
976. The almost sexless fœtus, (sex is only properly dereloped at puberty), is the Analogue of the Science of Social Embryology which is the Science of Society as it is, and has been, preriously to its proper birth into Intellectual, Spiritual; and Social Harmony. This includes the commonplace Sciences which relate to Social Affairs, as Politics, Political Ethics, Theories of Government, -not guided by any Scientific knowledge of the Law of Organization,-Political Economy, Statistics, etc.
977. The remainder of the Family Group, after excluding the infant, (or fœetris), is then the type or representative of Sociology in its higher stages of development, in the Scientific Reorganization of Society under the linowledge and guidance of the Harmonic Laws affecting the total arrangement of all Human Affairs ; the Adultoid stage of Sociological Science.
978. The Right Side of the Body is the Analogue of the Positive and Masculine Side of Society, which is public and active, and is associated by juxtaposition with the Right Fand as the Type of Activity, Execution, and Power.
979. The Lej't Side of the Body is the Analogue of the Negative and Feminine Side of Society, which is retiring and sympathetic, and which is associated with the Heart and with the Left Arm, as that with which the Mother most habitually encircles the Child.
980. The Upper Half of the Body above the diaphragm or the girdle, Figure 2, represents by Analogy, the Adults of the Family Group, the Father and the Mother, and thence, Ancestors or Seniors, Figure 3; and the Lower Half, or all that is beneath the girdle, represents the Children, and thus Posterity, or Juniors, derived from the loins. These last are called Descendants in the language of the Law, as contrasted with Ascendants who are the Parents, Elders, and Ancestry generally. Seniors again coirespond with Superiors, and these again, therefore, with the Upper Portions of the Body, and Juniors with Inferiors, and these, in turn, with the Lower Parts. These last are also called Subordinates, and also subjects of the Superior and Reigning Classes, and ultimately of the Head or Supreme Focus of the Body, the Court and Royal Palace of the Mind, the governing power over the Body.
981. We have in all this an intimation of a Truth of immense importance; namely, that Physiology can never be rightly studied nor completely comprehended, except by the reflected light of Sociology ; and that Sociology is, in turn, to be studied through the Analogies of Embryology and Phy. siology conjointly. It is, indeed, as hopeless to attempt radically to cure the Individual while Society is left diseased, as it is to attempt to cure a local disease of the body which is merely symptomatic of general derangement, without removing the causes of the general disorder. The growing attention bestowed upon Hygiene by the medical profession, and by

Society at Large, is the instinctual perception and admission of this Truth. Intellectuctly and intelligently accepted, and made the Basis of Medical Science, it will be revolutionary of the existing methods. The interests of the individual in so vital a point as health will be seen to be inseparably bound up with the interests of Society. The small-pox and the cholera are among the highest arguments for the Solidarity of all Human Affairs and Concerns, and for the rational necessity, that "we love our neighbors as ourselves."
982. To furnish a single more definite illustration of the exact Scientific Echo between the Physiological Domain (Pathological and Therapeutical) and the Sociological Domain, I shall affirm here, somewhat dogmatically, what further investigation alone will fully establish; namely, that Hemiplegia (that form of paralysis or palsy which affects one side of the body only) has its exact Analogue in Society, in that social disease which consists of the suppression, by law and opinion, of the freedom of one of the sexes. This is usually the suppression or oppression of the weaker sex, the female half of Society, as occurs most glaringly in Polygamic Countries, Turkey, for example. The one-sided paralysis of social life in such countries is, therefore, Social Hemiplegia, and in the light of its causes and operation, we can come to understand, all the better, what it is which occurs in this disease in the Individual Organismus. It should also be anticipated that the disease will occur most frequently upon the left side of the body, which is the weaker, and that which is representative of the Female Sex, and the most liable, therefore, to this species of disorder and oppression.
983. On the contrary, Paraplegia (the form of paralysis or palsy which affects the lower half of the body only, but upon both sides equally) has for its Social Analogue the oppression of Inferiors by Superiors, as of Children and Slaves under the Roman Empire ; of Slaves recently in America, and of Serfs in Russia. The inertia, demoralization, and helpnessness in-
troduced into a country by this species of oppression corresponds with the partial or complete inertia or helpnessness imposed upon the individual by this form of paralysis.
984. It may be added that Every disease and, indeed, every state of the Individual, whether of health or disease, has, in like manner, an exact Scientific Analogue in corresponding diseases and states of Society; so that we shall derive from Universology a new Science of Comparative Pathology,-between the diseases of the Individual Man and of the Collective Man,-which will enable us to study them each in the light of the knowledge of the other.
985. I may go even a step farther, and affirm that, by the extension of the same law of Analogy, we shall come to know the significance and value of every School and System of treatment in medecine, and of every plant and mineral, medicament or application, which shall be found to have curative relationship with any pathological condition of the Body; and of all the conditions of Life and Health, from the lowest individual, up to the highest Universal Aspects of Humanity. a. 1.
986. The Figures contained in the preceding Diagram are thus the three Typical Varieties of Anthropic Form (Human-Figure-Form). They are, in other words, the Head Forms, or Nature's Hieroglyphic Pictures, emblematic of the Governing Domains and Principles of that Superior Department of Being which bears characteristically a relation to the Human Form. They stand contrasted, therefore, with the Globe-, Cube-, and Egg-Form, which are the typical and representative Forms of the lower or Cosmical Department of Being; that from which Man is produced, as the living being from an Egg.

Annotation, t. 985.
"More servants wait on Man
Than he 'll take notice of. In every path

He treads down that which doth befriend him
When sickness makes him pale and wan" (1) (a. 17, t. 152).
(1) George Merbert.
987. We come, in the next place, to a still higher and the final Department of Typical Form, which interllends and unifies the Ocarian or Highest Cosmical Type with the Monanthropic or Highest Anthropic Type; -which Ulends, in other words, the Outline of the Eyg with that of the Individual Lluman Figure. This is, therefore, a Trinismus of that Typical Form of which the Cosmical Types are the Unismus, and the Anthropic T'ypes the Duismus. The Trinismus is the combination, correlation, and interworking of all the three Varieties in the Concrete Totality of Form and Being. Otherwise stated, the World is One (1) ; Man is Tico (2) (or Many) ; and the Marriage or Unition of Man with the World is Three (3). The Separate and then the Conjoined Views, again Conjoined, are Three $=$ One $(3=1)$, or the Tri-Unismus of Being.

9S8. The new Department of Typical Form here introduced (the Trinismus) may be denominated technically Conjugal, Nuptial, or Symbolic Form. As the Cosmical Type relates to the World as Egg, it may be said that the Anthropic Trpe holds similar relation to the Chick and the Brood; and that this new Type of Form holds again similar relation to the Cock and the Hen in their sexual partiality and adaptation to each other. They are then the originators of the new Egg and Brood, which do no more than repeat the Primitive Career. This is Re-production, as the culmination and Trinismus produced from the primitive Orarian or Fœtal Life ; I. As Projective, and Primitive, and Unismal ; II. Succeeded by, and combined with, Production, or the Growth and Development of the Post-Natal Being-Duismal-as of the Click, or of the Individual and Collective Man, before its perfection and harmony, and marriage through Science with the World which Humanity inhabits ; III. The Perfected or Adultoid Period is the Resultant of the former Two Periods.
989. The three Careers, successive and conjoined, are then Tri-Unismus of this Tempic Aspect of Being.
990. The following Diagram exhibits the Typical Forms of this Order of Form, reduplicated, first, with relation to the Fowl associated with the Egg, then with reference to Humanity associated with the Human Figure. This furnishes a Minor and a Major aspect of the subject crossed by the division into Sex as Male and Female.

Diagram No. 7 .
Figure 2.

Figure 1.


Note.-The Family Tree should, in strictness, be inverted, the roots above; inasmuch as the Younger Generations are instinctively regarded as Descendants.
991. It would seem, from this exposition, that the Lilliputians, in Gulliver, when dividing themselves, on the Egg question, into two parties,--the Big-endians and the Little-endians,-were by no means discussing a small matter; but that, on the contrary, their instinct had laid hold of the Grandest Difference which divides the affairs of the Universe. It is no less than the Distinctive Prime Differentiation between The Natural and the Logical Order in the Evolution of
all Things ( $\mathrm{t} . \mathrm{G}$ ) ; between the Arbitrismal and the Logicismal Supervision in the Universal Administration of Being (t. 349-353) ; and, in fine, between the Feminismus and the Masculismus of the Totality of Being itself (t. 323-328, 723731, 705, 739, 772, 744-749; c. 44, t. 136). It is the Grand Schism of all Time ; which can only be healed by that Enlargement of our Philosophy which shall compass not only the whole Egg, but shall do this even, in that double sense which shall recognize the two kinds of Egg, the Masculine and the Feminine Type, accordingly as the large or the small end is uppermost; and the ulterior conjugal harmony of the product of each with that of the other type (Integralism). The revelation of this Difference, of this Wholeness, and of this Harmony, is the hatching of the Brahminical Egg which has lain deposited for ages at the centre of the Hindoo Philosophy, Religion and Mysticism. The Hindoo System is broader than Christianity or than any other of the Grand Sectarian Divisions of the Religious Development of Humanity. (All the Religions are merely Primitive or Major Sects.) Christianity is more intense and vital than it. Hindooism is the Matrix, the White of the Egg ; the Analogue of Blank (White) Space (Dia. No. 3, t. 86, 87; t. 774) ; and other more Positive Religions are the Yolk; Christianity "the Germ" within the Egg. The phrase, "Vital Piety," is expressive and suggestive. Universology authorizes us to substitute for the axiom of the Naturalists Omne virum ex oro, (Every Living Thing comes out of an Egg), this other formula, Omne ex ovo, (Every Thing rohatsocver comes out of an Egg) ; or this, Omne vivum ex ovo et omne virum, (Every Living Thing comes out of an Egg and Every Thing whatsoever is Living). The English phrase to Egg on, (Saxon Eggian, to Excite), though pronounced by authorities to be a blunder in English, may, perhaps, be taken as meaning to promote, by successive acts or stages, as of generation. Ovation (or Egging) is the symbol of triumph or victory; and, inversely, Rotten-Egging,
is the unpleasant fate of the Martyr for unpopular Truths. $A b$ ovo (from the Egg) signifies from the origin or beginning, and hence, in respect to Universals, it means from Eternity or from the Origin of all things.
992. The Cosmos repeats Nature. The World and Nature are substantially in accord with each other. If we mean at any time the nature of Man, we specify it as Human Nature; otherwise it is the Nature of the World which is intended.
993. Anthropism repeats Science. Man is the Being who knows, (Lat, scire, to know, sciensa, knowledge), and Systematized Knowledge is Science. Man is, therefore, the Concrete Embodiment of Science, as the Cosmos is the Concrete Embodiment of Nature. The World and Nature are Unismal ; Man and Science, Duismal, respectively.
994. Nuptialism repeats Art,-interblending, modulating, and toning down the differences of contrasted organization, by that gallantry of which the Cock is among animals the preeminent Type, and through sacrifice, mutual concession, and reciprocal Unity, enforced by Charm;-such is the Supreme Artistic Effect, as developed in Life itself, the highest areva of artistic display. The monarch or leader in Society, in any sense, holds also, by analogy, a marital relation to his people, or the body of his followers ( $t$. 000). The art of governing men, so as to charm them out of all their antagonisms, and to conduce to the supreme happiness of all, by rightly adjusting all their relations actually or practically, upon an underlying basis of Science, substitutiug Attraction for Force, is the Highest of the Grand Arts, as it is the Supremest Service of mankind (t. 58). c. 1.

Commentary, t. 9.94. 1. The recognition of Government as belonging at the Head of the Domain of Art, while the fact is obvious when pointed out, is so rare as to give a peculiar interest to the following extract from Schiller on the Legislation of Lycurgus: (1) "It is a grand movement of the Human spirit
(1) Works, vol. xvi, p. 114, translated and Quoted by Prof. J. Louis Tellkampf on Codification or the Systematizing of the Law. Am. Jurist, vol. viii. p. 329.
995. The Cosmos, again, repeats and echoes to Philosophy (as included in the meaning of the larger term, Naturology). Anthropism echoes to the Domain of Positive Science (Echosophy), and Nuptialism to the Domain of Religion, which is no other than the Divine Art of Life itself ( $\mathbf{t}$. 15, and Tab. 2, t. 16). Philosophy, in no one of its accepted meanings, is so large as fully to embrace Cosmology or Naturology. So extended as to do this, it subdivides itself into Philosophy, Science, and Art, in the minor sense, or properly so called.
990. The Round Typical Forms of this Domain, of which the Globe is the principal one, represent Philosophy, including both Metaphysical and Natural Philosophy, as branches. The Straight Forms, of which the Cube is the governing one, then represent Sciento-Philosophy, and the Positive Sciences,
to treat that as an Art which had before been left to accident and passion. The first step in this most difficult of Arts must necessarily be imperfect, but it is always valuable, because at the same time made in the most valuable of all the Arts. The Sculptors began with 'Hermes's Columns,' until they could rise to the perfect forms of an Antinous or an Apollo of the Vatican. The Lawgiver must practice long in rough experiments, until, at last, the Happy Harmony of the Social Elements staris forth fully formed. The Stone suffers patiently the progress of the forming chisel, and the string which the artist touches answers without resisting his fingers. The Lawgiver alone labors on a self-acting obstinate material; the human freedom will permit him only imperfectly to realize the ideal which he may have entertained never so clearly in his orn brain. But here the mere attempt deserves all praise, if undertaken with disinterested benerolence, and prosecuted with Consistent Moderation." This splenslid culogium is pronounced, still, upon the purely Arbitrismal or Naturismal Stage of the Legislative Development of Human Affairs; low much more appropriately does it apply to the Logicismal or Scientismal Stage; and then to the Ulterior Union and Harmony of the Two, the Artismal or Trinismal Derelopment of this Grand Art. From the Universological Point of View the Legal Profession is at the Head of All the Professions, but this is true in the Preeminent Sense only, when it is the Disconery and Promulgation of Laws inherent in the Nature of Things, hence the whole Domain of Pure Science, which is in question; not the Lower Domain merely of the Enactment or Construing of Human Statutes, or the issue of Arbitrary Edicts. The true Lawrer is the Scientist, but the Highest Domain of Science is, again, Society, whence it is that Science in its Highest Derelopment echocs to the Legislative and Legal Domains of our Existing Social Derelopment.
as hereafter to be recast into higher exact Form as the proper Sequentiality or train of results from Sciento-Philosophy. Finally, the Oval Group of Forms represent Art-Philosophy, or the Domain of the Principles of Art, and the Cosmical Arts depending thereon.
997. Cosmology, Anthropology, and Symbolology echo to, or repeat, therefore, Philosophy, Science, and Art in the lower or proper acceptation of those terms. They are correspondential, but not identical with them.
998. Cosmology, in the larger sense here intended, is synonymous with all that Comte means by Positive Philosophy or his Fundamental Elaboration, added to all that the Metaphysicians mean by Philosophy. This grand Basic Mass of Knowledges is then that, as already stated, which breaks up into Philosophy, Science, and Art, in the more particular signification of those terms. c. 1; a. 1-13.

Commentary, t. 998. 1. The "Positive Politics" of Comte belong with the "Political Ethics plus the Science of Civilization" of Lieber. Prof. Lieber thus distributes the Sciences which pertain to Man-The Anthropology of Universology (t. 5): "Man can be considered as he is; as he ought to be; and as he has been; -Individually ; or Socially;-again, Physically, Morally, or Intellectually. Individually, Physically, as he is,-Man forms the subject of Anatomy, Comparative Anatomy, Physiology, etc., or Mecicine. Socially, Plyysically, and as he is,-of Political Economy. Indiviaually, Morally, as he is, and ought to be,-of Ethics, the Science of Education, etc. Individually, Intellectually, as he is,-of Philosophy of the Mind, or, according to English terminology, of Metaphysics. Socially, according to the relations of Right as it ought to be, -of Natural Law, Politics proper, etc.; as it is,-of Diplomacy, Positive Law, etc. Socially and Morally,-of Political Etirics. Socially and Intellect-ually,-of the Science of National Education, or in general, of National [Planetary] Civilizatron. The two Relations of Time, as it is [the Present]; and as it has been [the Past], together with the Ethic Relation, as it ought to be; give, applied to Law, for instance, the Positive or Existing Law, the History of Law, and Natural Law and Theoretic Politics." (1).

[^84]999. Again, Anthropology is synonymous with what Comte intends by Positive Politics or his Principal Elaboration, with the addition of Monanthropology and Human Physiology in the larger sense, or Biology, as shown in the Typical Table of Existence. No. 7, t. 40 ; a. 1, 2.
1000. Symbolology, the new and higher Science now introduced as corresponding with Nuptial, Conjugal or Symbolic Form, then conducts to Comparative Sciewoe, as that which translates Philosophy into Life, and hence into Sociology or Positive Politics, by the Law of Analogy, and vice versa; that which explains the World from the Idea, and the Idea from
the name of Morals, forming the highest mology ; while from the Statical point of step of the ladder, immediately after view, which he considers the more norSociology; remarking that 'it might, mal, he treats it as the introduction to with still greater propriety, be termed Anthropology. It presents itself, in the Anthropology [Monanthropology]; be- first instance, as a Department of the ing the Science of individual human World as contrasted with Man; but it nature, a study, when rightly under- reappears, in a higher sense, as Life constood, more special and complicated neted with its Spiritual Origins, and than even that of Society. For it is then as pre-eminently a branch of the obliged to take into consideration the Science of Man, in which category, therediversities of constitution and tempera fore, I have placed it.
ment,-la réaction cérébrale des viseères Végétatifs (1), - the effects of which, still very imperfectly understood, aro highly important in the individual, but in the theory of society may be neglected, because, differing in different persons, they neutralize one another on the large scale.' This is a remark worthy of M. Comte in his best days; and the science thus conceired is, as he says, the true scientific foundation of the art of Morals (and, indeed, of the art of human life) which, therefore, may, both philosophic-l ally and didactically, be properly combined with it " (2).
2. Comte rightly represents Biology as, from the Historical point of view, the Ultimatum of what I denominate Cos- explaining Cosmical Phenomena ly the

[^85]the World. This Higher Comparative Science or Science of Universal Analogy is the pre-eminent branch of Universology ; or is, in a sense, Universology itself (t. 930).
1001. We may now return for a cursory review of the subject to Cosmology and its several subdivisions as typified by the Point, the Curve, the Circle-Surface and the Globe for Naturology, with its basis on the Naturo-Metaphysic ; the Unit of Measurement (Straight-Sided Point, (c. 1), the Straight Line, the Square, and the Cube, for Science, with its basis in Sciento-Philosophy, and to the Egg-shapes as Embryo or Germ, Chalaza, Membrane, Infilling Substance, and Out-
analogies of our sentiments and affections; the other considering man as subordinate to the laws of the external world, and as explicable only by the explanation of the properties of Matter recognized in operation in the external world. The former of these philosophies is essentially metaphysical and theological. It rests upon the old assumption of Man's mind being the normal measure of all things: it makes Law the correlate of Idea; it makes the Universe subordinate to Man. The second is the scientific or positive philosophy."
5. It is the doctrine of the Incomplete Positivists ; that is, those who attach themselves to the Positive Philosophy, and reject the later speculations of Comte, the disciples of Comte, as representative of the technically Scientific Spirit, now quite dominant in the world, that the former of these two methods of phi-losophizing,-the Endogenous or Spiritual, including the opinions of the Church, and the priesthood of all former Religions, and of the Metaphysicians,-was provisional in the history of the Race, and that it is now destined absolutely to give way before the progress of Positive Knowledge, acquired by the methods of Positive Science. The former of these orders of thinking is only mentioned,
therefore, by the author above quoted and his school, for the purpose of being discarded, not in the sense that it never had a use in the world, but that, like the clothing of childhood, it has served its purposes, and must now be replaced by, so to speak, a different suit of opinions. Metaphysics, and Religion in that sense of the word which has heretofore prevailed, and which still prevails in the world, belong, in other words, to the puerilities of the world's infancy; appropriate for the time, but wholly inappropriate to the adult age of humanity. While in respect to the precise forms and cast of belief in the past ages, and the amplitude, so to speak, of their mental apparel, there is great truth, no doubt, in these affirmations of Positivism; arrd while we are confessedly in the midst of a great intellectual revolution ; yet it is the essential doctrine of Universology and of Integralism, as they are developed in this work, that these two Drifts of Being, of Conception and of Investigation, onc Subjective, and the other Objective, are of inherent and perpetual validity; and pertain, therefore, legitimately to the prosent and future history of the Race no less than to the Past. The true triumph of Sci-ento-Philosophy will be, first, to become mediatorial between them, and then to


#### Abstract

Tine, for Cosmical Art with its Principles or Philosopliy ( $\mathrm{t} . \mathrm{E} 53$ ). 1002. The Simple Round Point is here typical of Ontology, -Entity, Being, Thing, in the Absolute,-and hence of Mersphysics. 1003. The Curve as Arc of a Circle,-which may be Larger, Smaller, or Mean ; this last as the Equation of the other two $(+$ and -$)$; the whole as a Confluency of Points not distinctified, -is the Lowest and Simplest type of Mathematics. 100.4. The Circle-Surface as a mirror of Clearness, Reflexion, and Demonstration, and hence of Pure Subjective Speculation,


embrace their extremes, including and co-ordinating all that they inclose. The Law of Development and Careers by which one Principle is thrown into a governing importance in one Phase of Being, or at one period of time, and another subordinated, is itself subordinate to this higher Law of the Essential Permanence of all Principles which have ever existed-(Inexpugnability of Prime Elements)-with differences merely of manifestation. This is nothing more than a broader application of two fundamental Principles of Positivism:-The Permanency of Law, and the Modifiability of Phenomena-an application so enlarged, however, that it must find its Domain of recognition outside of the Philosophy of Comtc.
6. It is, indeed, claimed by Positivists that whatenever becomes certainly proven and known, falls, from that instant, within the scope of Positivism. But what if truths of immense importance are discovered and become proven and known by methods which Positivism repudiates or disowns? Will its adherents be justified in appropriating the results of labors with which they have no sympathy, and to which they give no approval? Comte claming to represent Pesitive Science plants himself upon the
standpoint of excluding Metaphysical and Psychological investigation. If, then, predominantly through the Metaphysical and Psychological method, a great Positive Discovery is effected in Science, and is accepted in the Scientific World, will it fall within or without the Domain of Positivism, technically so called, as circumscribed by its founder and his friends? Their claim, on tho one hand, to all that becomes certainly known, is, indeed, large enough to cover the whole field, and in that sense it could not be gainsaid; but, on the other hand, they are met by counterclaims which are just as extensive and imposing, and which from the opposite, as for instance, the Religious point of departure, also cover the whole ground. Thus, although Christ in his teachings makes not the slightest manifestation of scientific knowledge, such, I mean, as would be credited at this day as scientific by the Positivo Scientists; yet the ultra-zealous assertions of extreme Christians-as of Mr. Noyes, for example, of the Oneida Community, a Theologian of remarkable astuteness, boldness, and originalityare to the effect that all the Sciences which are being developed in the world at this dlay proceed directly from Christ, who held them all in his mind antici-
(Lat. Species, A mirror, and speculo, to think), is the Type of Logic.
1005. The more developed types of Mathematics and Logic are shown in the following Diagram. They constitute together Spencer's Abstractology (t. 566-571; 577-580).

Diagram No. 75.

Figure 1. MATHEMATICS.


The + - brought to an equation by instituting a ratio or proportion.

Figure 2. LOGIC.


B is in $\mathrm{A} ; \mathrm{C}$ is in B ; therefore C is in A .
patively, as the God-Man, when on earth, and is now revealing them in the " fullness of time," through discoverers, it may be, who have no recognition of the fact, or who may be wholly infidel or atheistic, in the posture of their minds. This is also, perhaps, the latent logic of all high orthodox Christian Theology, if the premises assumed be granted. The glory of all Science is thus quietly appropriated for the Christian Dispensation of Truth, in a way which fairly offsets the supposed claim of Positivism to whatsoever becomes certainly known.
7. For ourselves, let it suffice if we accredit to Positivism or to Echosophy as a distinctive Method of Human Knowledge, and to the Universitate, (or to Science, Philosoply, and Art), only so much of the total aggregate of our present and future mental acquisitions as shall have been derived from the methods of search which they have inaugurated, or recognized ; and let it suffice if we credit to the Religion
1006. Finally, the Solid Globe is the Type of the Natural Philosophy, especially in the Domain of the Philosophic Positice of Comte, (above the Mathematics as base), which is also Cosmology in the less extended sense of the term. Thus we conclude with the Elementary Analogues of Naturology.
1007. The Straightened Point or Microscopic Cube or Prism, the Least Unit of Measurement, is the Type of the $I n$ dwelling Spirit of Mathematics. It is the Infinitesimal Side of the Polygon when pushed to its Limit in the rirtual Circle, and as such the Least Extension of a Straight Line ; but by
lows, and will preside orer, restore and reconcile all things, from the time when this Principle of Adjustment shall be intelligentiy established in the World (t. 414, 432).
8. More distinctly, then, Universology is based on a Scientific Discovery and Demonstration of what Lewes here rightly affirms has been heretofore intuitively assumed in the Theological and Metaplirsical worlds; namely, "that Cosmical phenomena are explained by the Analogies of our sentiments and feelings, that Man's Mind is the normal measure of all things, that Lavo is, [in a most radical and important sense], the correlate of Idea, that the Unirerse is subordinate to Man, [without discrimi nating, as against the inanimate world, between Man and God]. All this in open heresy from the Positivist or technically Scientific Sehool of Thinkers, I distinctly affirm, and in so far side with the Theolugians and Metaphrsicians, going beyond them even, in their direction. I also sug. gest and expect to prove that eccry great adirmation ever seriously made and definded in the Thenlogical or Metaphysical World has been the foreshadoving, if not the distinet utterance of some great Truth, afterirards to be scientifically established; and that Unicersal Science, when fully devcloped, will recur to, and gice new
ritality by its endorsement to each of those Intuitice Truthes that it vill, in other words, account for, and sace the Spirit, if not the Form. of ecery Thcory, Doctrine, Rite, and Institution of the Past (t. 57).
9. At the same time, Universology reaffirms, with the Positivists, the subordination, (in a relative and subordinate sense, or in primitire carecr, but not, as with them, in the paramount and ultimate sense), of Man to the Laws of the External World. Hence Unirersulogy is Religio-Metaphysical on the one hand, and Positirist on the other It consists in the discorery and demonstration that the Law of Being is identical in both Domains, with inverseness of manifestation, but in complete correspondence or Analogy throughout: so that the Two opposiug Drifts of Human Development become perfectly reconciled in the larger Philosophy of Integralism.
10. Faith based upon Affection or Love is the Unismal Element of Social Fxistence and Morement. It is, in its first stagn, predominantly conserrative or tending to Static Existence. But Faith in a Prorressive Leadership converts into a Principle of Progression. This is at first the Sul-Dominant, as the former is the Dominant Aspect of the Suhject; but after the Contersion or C'hange in the world's opinion which shall
the same Scientizing Tendency by which we eliminate the Curvation, we also eliminate the Ideal Roundness which the Naturismal Line derives from the fact that it is generated by a moving Point, (c. 1, t. 639), and from the fact that the Point is an Infinitesimal Globule (t. 822); and in the Place of such Roundness we assign Straight Edges and Faces to this infinitely Minute Portion of Line. On the figure so obtained I have bestowed the technical name Minim of Straight Form, -as the Point is the Minim of Round Form, and the Least Portion of a Curve that of Curvilinear Extension (t. 546, 547). It is the Scientic Aton, as the Point is by Analogy the Natural or Naturic Atom of Existence. The Minim of Naturo-Artistic
develop the most interior clement of Faith, and direct it upon the Principles of Progress, (t. 436), the Progressive Ticndency will become the Dominant Characteristic of Faith.
11. Skepticism or Doubt suggested by the awakening of the Intellect is, on the contrary, the Duismal Element of Social Existence and Movement. It is, in its first stage of development, predominantly progressive or tending to movement; so much so that Buckle, the author of a History of Civilization, ascribes the whole of the progress of Humanity to Skepticism, the Opposite Principle to Faith; that is to say, to the Principle of Doubt provoking inquiry, investigation, discorery, etc. This in turn, however, by causing hesitancy and distrust of unwise Leadership and possible disaster, ends in mental revolt and reactionary conservatism ; and so, subsequently, by teaching a wise caution and graduated methods, it converts into The Conservative Principle. This recondite Conservatism of Skepticism is, in the first stage, Sub-Dominant, or a minor quantity only. Subsequent to its conversion, it becomes Dominant, and reveals itself as the Prudence of the Aged, and the Wisdom of the Sage.
12. Radicalism, the natural Objective of Skepticism, is only dangerous, therefore, when it fails to be sufficiently radical to go to the bottom (radix, The Root) of the subject. The cure for the evils of Radicalism is more Radicalism; as, often, the cure for the evils of Freedom is more Freedom. It is only by the last word of radical investigation that this Terminal Conversion into Opposites occurs, when the previously SubDominant Element of wise Conservatism from a Radical Understanding of Principles is developed and brought forward into obrious prominence.
13. Integralism is the Trinism of Balanced Vibration and Harmony of Faith and Skepticism, covering in the larger sense, however, the similar adjustment of All Opposite Principles. It is, then, a larger word than Universology, inasmuch as it sketches over the whole Domain of Practical Philosophy, as well as that of Theory or Speculation; and over the inexact couplings of all the constitutive Principles of Being; while Universology, as a Science strictly so called, extends only so far as the determinate Laws can be traced.

Form, (of the Art Degree in Nature), is, however, the Infinitesic Egg-Form. c. 1.

100s. The Minim of Form is then the Type of the Lowest Conceivable Analytical Exactness, and hence of the Gencralizations from such Radical Analysis which are summed up in the Principles Unism, Duism, and Trinism. The Minim of Straight Form is, however, especially typical of Dursmwhich is The Dominant of this Sciento-philosophic Domainby its apt representation of the Thought-Line which interposes between the two Units which constitute, along with that Line, the Sum which we call Two ( $\mathbf{t}$. 503). This Analysis is the starting-point of Analytical Generalization, as the Round Point expanded to an Infinite Circle, and embracing the Universe, is typically the starting-point, on the contrary, of Ob servational Generalization. c. 1, 2.
1009. We have now arrived at the proper occasion upon which not merely to introduce, but to emphasize strongly the fact that there are Two Entirely Distinct and Opposite Grand

Commentary, t. 1007. In Diagram 68, t. 917, the Point has been assumed from the previous Trigrade Scale of Round Form to stand as hasis of a new Compound Scale of four Degrees, otherwise constituted of Square Form. Here, with more rigorous analysis, the idea of a Cuboid Point is introduced in addition to that of the Round Point habitually conceived of; the blending of the two is then the Minute Egg.

Commentrery, t. 1009. 1. It scems that Confucius had a certain conception of these two opposite varicties of generalization and of the nature of the principles derived from them. The following is his quaint way of stating the matter:
"When the Superior Man [the Sagc] speaks of the extensiveness of his Principles, then the Universe cannot contain them: when he speaks of their minuteness, no being in the Universe can split them " (1).
2. The necessity of beginning in an orderly way from First Principles, in order to work out any satisfactory results, was also appreciated by him, and is stated as follows:
"The Tao [Reason] of the Superior Man may be compared to going a long journey, where you must commence at the nearest point, and to the climbing of an eminence, where you must begin at the lowest step " (1).
(1) Aphorisms of Confucius.

Orders of Generalization, the former of which is Naturismal, Observational, and Roundish or Lumpy, as when we speak of Round Numbers ior a term proximately correct, or "so much in the lump" ( t .565 ) ; and the latter of which is Scientismal, Exact, and of Infinitesimal Origin; one derived from the idea of the Amplexus or Embrace of a Subject, and the other from that of its Central Penetration and Radical Conquest. The former is the kind of Generalizations which we have in Natural Science, and in the Inductive Sciences generally ; the latter is the kind of which we have minor illustrations in the Mathematical Formulæ, in which Different Orders of Phenomena are bound up in a Single Ratio, and the Major illustration of which is now coming forward as the basis of Universology ; in Deductive Science, therefore, properly so called (c. 1-7, t. 345).
1010. This new Order of Generalization-the Analyticalbegins at the opposite End from the Circumferencial Observation of the former, the Observational ; namely, at the very lowest degree of possible Analysis. Arrived there, it founds upon the Ultimate Residuum of such Analysis the Necessary and Universal Principles (then called a priori) which must, in the very nature of Things and of the Pure Reason itself, embrace all Phenomena. This is Analytical Generalization ; and it is by virtue of it that we are now enabled to include all the Phenomena of Being under the three Principles, Unism, Duism, and Trinism (t. 203).
1011. Observational Generalization is then a posteriori and Inductive, as Analytical Generalization is a priori and Deductive. This last, Analytical Generalization, is Generality carried up to its Highest in a Necessary Universality derived from the Minutest Particularity. By an immense and unanticipated operation of the Principle of Terminal Conversion into Opposites, (t. 83), the Microscopic Minuteness of the Inspections of the Intellect supplements and exceeds the broadest telescopy of the Observational Powers of the

Mind, and furnishes those Universal Laws, as Necessaliy Trutis, which no industry in the accumulation of Observations conld ever exactly discover or fully confirm. It is these which, as the Principles of Universology, condense the Universe into a Focal Point siluated wheresoever voe look, and have so rendered the discovery of Universology possible. This is the meaning, brought to the Light of the Understanding, of Swedenborg's mystical statement, that "all things are contained in the least thing" (c. 1-9, t. 321; c. 1-7, t. 345).
1012. Universology is, therefore, based on finding in the Determinate Particular, (any one thing howeecer minute), a General Law-or, more properly, A GROUP OF UNIVERSAL LaWS-as a new basis of Gemeralization distinct from and traversing the Law or Laws of Being gatirered frone Observational Generalization (namely, the collection of numerous facts, and the deductions made therefrom). This is Aralytical Generalization, (Universal), as distinguished from Observational Generalization, (always partial or fragmentary, or, at all events, less than universal). It is the Interior, and VITAL Law of all Ofganization, and hence of the Constitetion of Being itself, (transcendental),-as distinguished from the External and Dead Laro. It is a newo (or neroly discocered) Scientific Entity, a nero Element in Science; revolutionary, exactifying, inaugurative of new Careers, and Scientifically suppeme. c. 1-18.

Commentary, t. 1012. 1. The distinction between Obserrational Generalizations and Analytical Generalizations is not the same as that between Induction and Deduction, although it has a relation of Similarity to it. Both of these kinds of Generalizations are proximate or actual Universals, from which we may proceed deductively, after they are discovered and established, towards the particulars included under them, or to which we may procced inductively from those particulars, for the previous purpose of effecting the cliseovery; but the Decluctive Or lers and the Inductive Orders in the two cases are opposites.
2. Those who deal with Obserrational Generalizations employ first Induction to discorer them from Particulars, and then Deduction to apply them to other
1013. Next above the Straightened Point is the Straight Line. The Straight Line is the Type of Laws in Science, as derived from the Primordial Principles represented by these Minims of Straight Form, as the Heads or Beginnings of Laws. Laws and Principles are generally regarded, as previously stated, as Synonymous Terms (t. 589). For purposes of ordinary exactness it is not objectionable to continue to treat them as such ; but, in strictness, they differ according to these types :
1014. The Square is representative of Exactified Speculations and Explanations, under the guidance of Rnown Laws; or, in other words, of Pure Abstract Scientific Theories, not as yet confirmed by the induction or accumulation of corresponding facts.
1015. The Cube is the Type, Symbol, or Representative of Science or a Science as a completed Structure, as to its main outline. It is then the body of a Temple or Edifice, having in it, by Subdivision, various apartments or rooms.

Particulars; and the case is the same in respect to Analytical Generalizations. Hence there are four items of discrimination, and not two merely, now brought before the mind and requiring to be attended to; two of them old and familiarly recognized, (Induction and Deduction), and two of them new and peculiar to Universology (Observational Generalizations and Analytical Generalizations). It is as if we should first distinguish the Periphery of a circle as Observational Domarn, from the Centre as Analytical Domain; and should then distinguish the going to or towourds either of these, as Inductive Procedure, and the yoing from either of them as Deductive Procedure-the result being four distinct Drifts of Direction.
3. The centre of a circle represents pre-eminently the region of ultimate Analysis as the point where the mathematical elements of the whole circle are discoverable; but in a more generalized view of the subject everv pont is a centre ; so that the Analytical Centre of Being, the Origin of Lavs and Life, exists everywhere, or has, as it vere, the Divine Attritute of Omnipresence. Hence it occurs that all Universals or Principles are contained in Any, The Least Thing whatsoever; so that Analytical Generalization may take its departure from any point in the Universe.
4. Both Observational Generalizations and Analytical Gencralizations are Universals, but in senses which are wholly distinct from each other, as explained in the text. Obserrational Generalizations are extracted from the Totality of

When the Science is Universology itself, it then represents the Completed Temple of the Scievges; each apartment being a Special Science within the Larger Edifice, "the House of Many Mansions." (t. 948.)
1016. The Cube is then, in all ways, the Grand Eluborate Sciestific Einblem, while it is also the Grand Type of Structure or Arcirtectural Plan. Imbuing the mind with Science or Knowledge is instinctively called In-struction (Lat. in, in, struere, тo Burid) or Building-in.
1017. The Cube presents better than any other figure the conjoined conceptions of Lengti, Breadtif, and Thicktif (Thickness) ( t . 1016) ; which are, in an important sense, the radical conceptions of all Form. The next following Diagram exhibits these determinations of Form, with the following modifications from the Primitive or Abstract Ideas:
1018. Length, as a purely abstract conception, is equiralent to the Perpendicular, (by derivation primitively from the idea of that which is exactly adjusted, endwise, to the axis of the
the Universe as facts, or from so near an approoch to that Totality as can be effected. Analytical Generalizations-the nerv elements and instruments of Science now introduced-are as Eniversal as would be the Obserrational ones if it were possible, which it never is, to cover all the Details of Universal Bein! by our Observations; but instead of being derived from the inspection of the achole Chirerse as fact, even proximately, they are extracted from the critical and rational inspection of any least part of the Universe; any single Object or Thought or Erent whatsoever; and not even with reference to it as a Fact, but with reference to the Necessary Ideal Conditions under which it must exist, if it vere a fact. There are ideas, or aspects of idea, without which the conception of the Facts as real, or supposed even, is impossible; hence they must be esteemed Necessary and Universal Prisciples, present, in the same manner, in every other lenst part or larger part of the Universe, and equalis so in the Universe itself, as one whole Obiect or Idea.
5. The Analytical Order-the Universological Order, by which we proceed from Analytical Generalizations, (that is to say, from Unism, Duism, and Trinism), ly a Universal Decluction, and the only Unirersal Deduction which can be made, since Ol,serrational Generalizations ann never be alsolutely Unirersal, to the Particulars embraced under them-must not be confounded with "Analysis," nsed sometimes as synonymous with Induction, as shown previously by quotations from Prof. Henry and Swedeaborg (c. 1, $t, 345$ ). The reasoning to or
eye), and substituting for the eye the point at the centre of the Earth.
1019. But in respect to the House or Edifice, represented by the Cube, this dimension, Length, which would be, therefore, the Height of the House, becomes, by a certain Terminal Conversion into Opposites, or by Antithetical Reflection, betiveen the Abstract and the Concrete; or, more properly, between the Elementary and the Elaborate, translated into the Protension of the House, or its Extension from the Front to the Back, or inversely from the Back to the Front, although this diameter is sometimes also denominated Depth.
1020. The Primitive Dimension of Thickth (thickness) becomes then, by a counter-inversion, the Height of the Edifice.
1021. The Width or Breadth of the House, the mean term, does not change, however, and is always the expansion from
towards Principles from Facts, which is Induction, proceeds, it is true, by the aid of the Analysis, in a sense, of the Facts which are brought before the Observation, and is, in that degree, an Analytical Method; but the Analysis, in that case, is not radical, and is not, indeed, the leading idea. It is an Analysis in the sense of finding a so-called Law in the Facts, by which the Facts may be strung together or classified as Facts, or in respect, so to speak, to their external bodliy appearances; and it is merely this Stringing-together or Classification which is the leading idea in the process of Induction. The Analysis goes no lower than to furnish a basis for it, and the process as a whole is Synthetical rather than Analytical.
6. Analysis, as meant in Universology,-that which has conducted to the Analytical Generalizations, Unism, Duism, and Trinism,-is, nn the contrary, specific, incisive, and metaphysical, even "to the dividing asunder of the bones and the marrow" of the particular Fuct or Thought or Event which is submitted to inspection, and from which the Principles in question are then extracted; not merely or mainly as a means of classifying the particular Phenomenon along with other Phenomena which it resembles, but for the purpose of extracting and defining the Recondite Principles involved in both this and the Similar Phenomena; and as a means of identifying the same Laws and Principles occurring elsewhere among other Facts and other Particulars having in them this common ground of Unity with the Facts previously investigated, while phenomenally they may be the most unlike possible to each other.

Left to Right, or Right to Left, as exhibited by the Front-face of the Building.
1022. The Thickth, now become the Height of the Edifice, is, again, donble, one part descending below the Suriace as Cellars, Foundation, etc., the other arising as the Main Elewation of the Edifice into the Atmosphere and Pure Space above. The former corresponds with what primitively or in abstract Conception-but in the Natural Order, or from the Naturismal Standing-point (t. 000, c. 32, t. 136)-is the Positive, Substancive Domain, represented by the solid earth which is excaratea for the Foundation, etc. ; and the Spacic Half is in that sense, Negative ; but by Temminal Conversion into Opposites, or by Antitietical Reflection of the Natural and tife Logical Order with their Consequent Two Positives and Two Negatives, the Main Elevation is Logically Positive, and the Subterranean Half is now Negative ; so fully so that the latter is, as it were, left out of the account in the ordinary estimate of the Edifice, and the Main Elevation, now the Posi-
7. By the Analytical Order is still not meant even this Subsoiling of Analysis, except in the secondary way in which it is accessory to the discovery of the Analytical Generalizations. The Analytical Order, as such, is, on the contrary, predominantly Synthetical, proceeding from these Analytical Generalizations, and so characterized by them as appropriately to derive its naming therefrom. It is, in other words, the Order of successive Analyses and Syntheses, procceding from Unism, Duism, and Trinism, as the Head or Common Fountain of the process upwards and outwards into the details and particulars of the Universe at Large, and especially throughout the Domains of our own practical Interventions and Constructions.
8. The Ohservational Order is then, on the contrary, that order which takes its origin from, and is characterized by, Observational Generalizations. Both of these Orders are, therefore, in the main, Deductive; the previous Induction in either case being now dismissed, after the Principles are discovered, as no longer having anything but a Historical value. The Observational Order is a procedure of a similar character to the Analytical Order, but contains the application of Laws resulting from Observation, and established in the ordinary or prevalent Scientific method. There are, therefore, two a priori and two a posteriari Methods, if we include the processes by which Principles are discovered; while, omitting these, we may fall down, for ordinary purposes, to the
tive and Ruling Aspect of the Subject, alone remains. This is then the Height of the Edifice, whence it results that practically or in respect to the completed Composity of Things -that aspect of the Concrete which I denominate The Elab-orate-"the Length, the Breadth, and the Height thereof" are properly put in the place of the more Abstract and Elementary Discriminations, Length, Breadth, and (Thickness or) Thickth.
1023. It results from what has been shown that the Cube or Main Elevation of an Edifice, Fane, or Temple, is, by an obvious echo of Analogy, the Standard Emblem, or Symbol, or Type, of the Total Elaborate Construction of Being. All the previous discriminations of Universal Form, from which this Sciento-Typical one has now been laboriously eliminated, are again repeated in it, so that we may, if we choose, dismiss all other modes of the consideration of Form, and confine the investigation of every possible Morphic Conception to this
recognition of the Two Orders only, the Analytical and the Observational, respectively (c. 1-7, t. 345).
9. It is fortunate for the establishment of this new Terminology that the terms Analysis and Synthesis have nearly ceased to be used as synonymous with Induction and Deduction, for the reason, perhaps, that, as I have shown, they are not wholly appropriate to the expression of those ideas; and as we are now supplied with the terms Induction and Deduction, which are specifically understood, the terms Analytical and Observational can well be surrendered to the new Science, for the purpose of marking the new and exceedingly important discrimination here introduced.
10. There is, as previously observed, however, an echo of resemblance between the two classes of discrimination. Observational Generalizations, and Observational Order based on such Generalizations, have a Repetitive Analogy with Induction or the Empirical Method, and are closely allied with it. Analytical Generalizations and the Analytical Order have a similar relation to Deduction and Radical Analysis, and a corresponding alliance with them.
11. This is after the discovery of the Principles is made; but with reference to the order of procedure and the order of mind engaged in the processes of their discovery, it is just the opposite. The discovery of the Grand Analytical Generalizations here brought forward, so far from being characterized as Buckle characterizes the Deductive method and Order of Mind, is characterized in the opposite way. It is the result, indeed, of a more radical application of the

Supreme Modelic Type-Form. The Diagram now to be introduced, a first sketch or mere suggestion of the larger Structural Outline, will furnish the text for the explanation of what is involved in this statement.

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\text { Diagram No. } 76
$$


"cautious, patient, and somewhat creeping method" of Induction. It is no other, in fine, than the culmination and ultra-extremity of Induction itself (c. 7, t. 345 ). It tends, therefore, in the extremest degree to "the diminution of the number of Laws by gradual and successive Analysis "-another characteristic of Induction. The Analytical Generalizations in question are, in fact, the only Treee Screntific Universals.
12. These subtleties are very abstruse, but they are indispensable to a thoroughly right understanding of the subject. The reader who is only desirous of a general comprehension of it may omit them. What it is essential, however, to understand, is, that the difference between what Buckle calls Deduction, the True, Exhaustive Universal Deduction now instituted from Analytical Genferalizations as the Primordial Principles of All Being, and is the same in kind as the difference previously pointed out between the Poetical Perception of Analogy and the True Scientific Discovery of a Law of Analogy, drawn from the Analysis of Being down to its First Elements (t. 153, 154). To either case, however, the following profound remark of this distinguished author is alike applicable: "In a complete scheme of our knocledgc, and when all our resources are fully developed and marshalled into order, as they must exentually be, the two methods will be, not hostile, but supplementary, and will be combined into a single system." (1).

[^86]1024. The Length (equal to Depth in the superficial sense) repeats the Cosmical Idea. It is this back-lying Depthfrom Front to Back-which gives what in Geometry is called Solidity of Form, or Form of Three Dimensions, and whichas Solidity, and Weight, and Thickness, and Substance, and Nature, all Analogues of each other-is the World-like or Cosmical Aspect of This Cubic or Sciento-Typical instance of Form ( t . ).
1025. The Height-Dimension corresponds with Anthropism ; to the Uprising, or Standing-up, as of the man who rises to his feet. It is in accordance with this idea that Columns or Caryatides, arising from Pedestal (Foot) to Capital (Head), are the appropriate adornment and support of the Front Elevation of the Temple or other grandly constructed Edifice. Pillars and Trees in the Forest even, as "the Cedars of Lebanon," are Scriptural Types of Men.
1026. Finally, the Breadth of the Edifice, with its two equal Sides or Halves, upon the two sides of the main entrance, as

[^87]Male and Female, united or married, and standing, side by side of each other, repeats the conception of Nuptials or Conjugality. The Male and Female Figures appearing in the Front of the Diagram accord, therefore, with both the Height and the Breadth of the Building.
1027. Each of these Dimensions-the Length, the Breadth, and the Height of the Edifice-subsequently undergoes a Symbolic Subdivision, furnishing Apartments, first by the Number Three, (3), representative of Round, Long, and Modulated Form-Nature, Science, and Art ; and then by Four, (4), representative of Point, Line, Surface, and Solid-Entical, $\Lambda$ bstract, Speculative, and Concrete (Entity and Relation + Phenomena and Noumena).
1028. The Three multiplied by Four-the Leading Numbers representative of Oddness and Evenness, of Inequism and Equism, or of Freedom and Necessity, respectively (Dia. No. 64, t. 903; c. 10, t. 503)-gives as product the Ruling Sacred Number Twelve (c. 10, 11, t. 503; c. 1-00, t. 863). The
truth, but at an approximation to truth. Finally, and to sum up the whole, we may say that a deductive habit, being essentially synthetic, always tends to multiply original principles on lancs; vehile the tendency of an inductive halit is to diminish those laucs by gradual and successive analyses." (1).
14. Buckle undertook virtually to compass the discovery of Tie Universal Scrence; more especially as its Principles should be exhibited in the underlying Laws of Society. He mistook, however, the method which was to lead ultimately to that result. He began in the effort to embrace All the Details of Being, classifying and arranging them by the widest application of the Obserrational Method, hoping thereby to attain to that Unity which is, on the contrary, only possible by first arriving at, and then proceeding from, the Most Radical and Exhaustive Analysis-the Annilytical Method.
15. He became finally aware of the defect in his own method, without, however, falling upon the discovery of the more fruitful and developing one; that one which alone renders the existence of a Universal Science possible. His lament over this barren result, and his manly renunciation of previous exaggerated pretensions, are contained in the following passage, the most elociuent wail, probably, over disappointed hopes to be found anywhere in the Literature of Science:

[^88]$12 \times 12$ gives the Grand Measure of Harmony among Numbers, the Second or Scientismal Power of Twelve, 144 ( $\mathbf{t}$. 000). Morphically, this is the Height multiplied by the Breadth, as exhibited in the Face or Front Elevation of the Edifice. The corresponding Cubic Number $12 \times 12 \times 12$ is 1728 . The tracing out of the mysteries of this high Symbolism into detail must be avoided in this elementary work. The specific relations of this Governing Variety of Form to the Celestial City seen in vision by John will be treated of more in detail in other works. It is hinted at rather than expounded at this and other points of the present work ( $t$. ).
1029. The whole doctrine of "Measured Series," of Scalar and "Pivotal" Numbers, and their relations to Corresponding Typical Measurements, and Dimensions of Form, hinges upon the Primitive Cut-up and Distribution of the Cube.
1030. The same Three DiametricalPlanes by which we have previously trisected the Globe, representative of the Entire
16. "To solve the great problem of affairs, to detect those hidden circumstances which determine the march and destiny of nations; and to find, in the events of the past, a woay to the proceedings of the future, is nothing less than to unite into a single science all the laws of the moral and physical world. Whoever does this, will build up afresh the fabric of our knowledge, re-arrange its various parts, and harmonize its apparent discrepancies. Perchance, the human mind is hardly ready for so vast an enterprise. At all events, he who undertakes it will meet with little sympathy, and will find fero to help him. And let him toil as he may, the sun and noontide of his life shall pass by, the evening of his days shall overtake him, and he himself have to quit the scene, leaving that unfinished which he had vainly hoped to complete. He may lay the foundation: it will be for his successors to raise the edifice. Their hands will give the last touch; they will reap the glory ; their names will be remembered when his is forgotten. It is, indeed, too true, that such a work requires, not only several minds, but also the successive experience of several generations. Once, I oren, I thought otherwise. Once, when I first caught sight of the whole field of knoorledge, and seemed, however dimly, to discorn its various parts and the relation they bore to each other, I was so entranced with its surpassing beauty, that the judgment woas beguiled, and I deemod. myself able, not only to cover the surface, but also to master the details. Little did I know how the horizon enlarges as well as recedes, and how vainly we grasp at the fleeting forms, which melt away and elude us in the distance. Of all

Universe, when now applied to the Cube, give Eight Minor Cubes (Cubules) as the result; seven of which may be brought into view as having Depth, from a single standingpoint, chosen at an angle; the remaining one of them being always obscured in that particular, exhibiting its surface only. The following Diagram will illustrate :

that I had hoped to do, I now find but ton surely how small a part I shall accomplish. In those early aspirations there was much that was fanciful; perhaps there was much that was foolish. Perhaps, too, they contained a moral defect, and savored of an arrogance which belongs to a strength that refuses to recognize its own weakness. Still, even now that they are defeated and brought to nought, I cannot repent having indulged in them, but, on the contrary, I would willingly recall them if I could. For, such hopes belong to that joyous and sanguine period of life, when alone we are really happy; when the emotions are more active than the judgment; when experience has not jet hardened our nature; when the affections are not yet blighted and nipped to the core ; and when the bitterness of disappointment not having yet been felt, difficulties are unheeded, obstacles are unseen, ambition is a pleasure instead of a pang, and the blood coursing swiftly through the veins, the pulse beats high, while the heart throbs at the prospect of the future. Those are glorious days; but they go from us, and nothing can compensate their absence. To me, they now seem more like the visions of a disordered fancy than the sober realities of things that were and are not. It is painful to make this confession; but I owe it to the reader, because I would not have him to suppose that either in this or in the future volumes of my History I shall be able to redeem my pledge, and to perform all that I promised. Something I hope to achieve
1031. On a previous occasion, in tracing the constitution of the Egg-Form from the combination of Globe and Cube, (Dia. No. 51, t. 784), One only of the Eight Incipient Cubules resulting from the Trisection of the Globe was saved, and the other Seven were rejected (t. 783). We have now, in a sense, the opposite case, in which Seven of the Octave or Series of Eight remain entire, and One is rejected, or at least held in an ambiguous position, so that it might be either reckoned in, or reckoned out of the Group. The Musical Octave, which is a Grand Measuring Cord of Harmony relating to all spheres of Being, (t. 583), derives its name from the number Eight, and is ideally regarded as Eight Tones or Notes. The Eighth of these is, however, really thrown out, as belonging to another Octave, which overlaps the given Octave (c. 39, t. 503). We have therefore the Series of Eight reduced virtually to seven, by the exclusion of one. The following Diagram exhibits the Eight Cubes resulting from the trisection of the Primitive Cube, and now
which will interest the thinkers of this age ; and something, perhaps, on which posterity may build. It will, however, only be a fragment of my original ciesign" (1).
17. The foreboding of Buckle for the primitive imperfection and the destined neglect of the ultimate discovery at which he aimed, would probably have been modified had be conceived of the true method by which the result was to be attained. A positive discovery and demonstration stand upon a totally different fonting from any general inferences whatsoever from even the most extended observations, and can hardly fail, in the present vivid and appreciative age, to meet with a promptitude of acceptance in some measure adequate to its importance, and when of universal import, to mark the decisive epoch, in all human affairs, which I have not hesitated to predict in the present work, as hinging upon the discovery of Universology.
18. By the Observational Method, the "Principles of the Superior Man" may he in respect to their "extensiveness,"-in the language of Confucius, so broad that "the Universe cannot contain them ;" it is only in the Anaiytical Method, however, that those Principles are, in respect to their "minuteness," so fine that "no Being in the Universe can split them;" can analyze them, that is to say, a step further (c. t. ).

[^89]explicated or umravelled and brought into Series or Line, as the Ideal Basis to which Nrature has conformed in the distribution of the Notes of the Musical Scale.
\[

$$
\begin{gathered}
\text { Diagram No. } 78 \text {. } \\
\text { Do Re Mi Fa, Sol La Si Do. } \\
\square \square \square \square \square \square \square \square
\end{gathered}
$$
\]

1032. A closer examination of the Features or Items of Thought, suggested by the Trisection of the Cube, furnishes the precise type or method of all the remaining discriminations of the Musical Octave; the Five Semi-tones, the 3 (4) Chords of the Octave, as well as the $\mathbf{7}$ (8) Diatonic notes, etc. These details must be omitted. Music is the Harmonic Law of Universal Construction, Artistically condensed, compressed, or epitomized,-from the Tri-dimensionality of the Typical Cube, Edifice, or Temple, transmuted from Length, Breadth, and Height,-into the Uni-dimensionality of a Single Cord or Line. Music is, therefore, at the High Artistic Extreme, a repetition of what the Mathematics are, at the low and basic Extreme, of Measurement ; for it is the total purpose of mathematical labors to reduce Every Variety of Extension into Equation with some Unit of Line or Long Measure. Musical discriminations are, however, too technical to be more than alluded to cursorily in an elementary work like the present.
1033. The series of Numbers here involved, and which has been previously noticed (c. 39, t. 503), is:

$$
\begin{array}{lllll}
1 & 3(4) & (5) & 7(8) & 12
\end{array}
$$

This is the Artistic or Artismal Measuring Series of Scalar and Piootal Numbers, and is that of which Fourier especially affirms that the "Series distributes the Harmonies." It applies in Music especially to the element of Tune, which is the Domain of Space or of Tonic Display, that, in respect
to which we say High and Low. This Series of Pivotal or Sacred Numbers is an Extract or Essence derived from the Composity of the Odd and Even Numbers. It is the Trinismal or Artistic Department of Typical or Pivotal Numeration:
1034. The number Two (2) repeats the Straight Line. The number Four (4) repeats the Square. The number Eight (8) repeats the Cube. This Order of numerical Distribution continued in the same ratio furnishes the Duismal or Scientic Corresponding Department or Series. This is an Extract or Essence derived from the full Series of Even Numbers, as follows:

## $\begin{array}{lllllll}\text { (1) } & 2 & 4 & 8 & 16 & 32 & 64 \\ \text { (128). }\end{array}$

Technically, this will be referred to as the Scientismal Measuring Series of Sacred or Pivotal Numbers. It is this which distributes the exact Outlay of the Prmitive or Typical Plans of Structure, properly so called, in all the realms and departments of Being ; as, for instance, of the Members and the Bones of the Human Body. It is in Music this Series which distributes the Divisions of Time (as contrasted with considerations of Space or Tune) into the one Semibreve, divided into 2 minims, 4 crotchets, 8 quavers, 16 semiquavers, 32 demisemiquavers, and 64 hemidemisemiquavers. Sixty Four is the Grand Ruting Number of this Scientific Series of Numbers. This number results, morphically, from the Renewed Tri-section, by the Three Diametrical Planes, of the Primitive Cubules tri-sected from the Primitive Cube; in other words, it is the Second Power of the Grand Basic Sci-ento-Sacred Number, 8 (Eight). It is within these Ratios of Cubes and Squares, and their Echo to Spaces and Times, that the rationale of Kepler's Laws has hitherto lain hidden, and from which Universology will withdraw it. Again, however, the detail must be omitted.
1035. The corresponding Naturismal Series of Measur-
ing Numbers is the Simple Succession of the Odd Number Series, as follows :

## $\begin{array}{llllllll}1 & 3 & 5 & 7 & 9 & 13 & 15, & \text { etc. }\end{array}$

This Series measures the increments of velocity of falling bodies, and the ratios of various other natural phenomena. It is to Nature what the Even Numbers are to Science. In Music it should be found to apply in connection with some Natural Ratio of Augmenting Stress, which is the Substancive Element or Body of Music, contrasted with Space (or Tune) and with Time.
1036. If the tri-sected Cube be looked at directly, (from the front, not from a standing-point chosen at an angle, t. 1030), Four Subdivisions or Minor Cubes only are seen. The Four which are behind these fall into obscurity, and appear to the thought as one mass, representative merely of the back-lying Substance. The Typical Eight thus undergoes a natural reduction or abridgment, and becomes Five only; Four, Normal or Regular, and One, Condensed or Abridged, but equal, in a sense, (that is to say, in Bulk, reduced, it may be somewhat, by Artistic Modification), to the other Four. This illustrates a Principle in the Operations of Nature which will be referred to, technically, as

## The Principle of Abridgment.

This Principle reappears in a thousand forms, in all the different Modifications of Development, but still under definite Laws traceable with exactitude under the guidance of the Science.
1037. It is the Process and the Principle above described which furnishes the Type of the First Grand Division of the Human Body into Trunk and Limbs. The Four Quarters terminating in Limbs represent the Four Cubules in presence, disparted and removed to the right and left, and to the two positions above and below, revealing the Torso, or Trunk, (here exhibited as a mere block) as their interblended
equivalent, the additional One in the total Five back if, and, as it were, now between the four, as in the Diagram below.

Diagram No. 79.


This is apart from the Animal Head and Tail which are derived from an Axis passing through the central body.
1038. Upon the Extremity of each of the Four Limbs this process is then repeated (with artistic Modification). The Four Fingers, slender, taper or line-like, repeat the Four Limbs of the Body, and again represent the idea of Presence, Outline, Form, Feature or Limitation. On the contrary, the thickened and shortened Thumb, massive or Substance-like, repeats the Torso, or the Body of the Body Proper, and is again representative of the general idea of Massiveness or Substance. More elaborately and accurately stated, the Analogy is this, that the Palm or Metacarpus repeats the Trunk, and the Thumb the Head, which are then representative of the entire Central Column-Head and Trunk-the Thumb as Head adjoined by the Carpus or Wrist as Neck. The whole is artistically modified or adjusted so as to enable the Wrist to serve in the additional capacity of a nexus with the Arm and a Transition to the Central Body, of which the Hand is a mere Satel-
lite or Dependant. The Thumb is crowded aside from its natural position as Head of the Hand, which would be that occupied by the Arm, and is carried forwards into co-operation with the Fingers, somewhat as the Muzzle of the Animal when feeding is brought into conjunction with the Paws.
1039. As in the Second 'rrisection of the Cube, we have 64 Cubules or Compartments of the Second Order of Minitude, so the Typical Plan of the Bone-Distribution or Framework of the Human Hand inrolves 64 Compartments. Of these, one half, or 32 , are represented by the Thumb alone, by the Principle of Abridgment,-Bulk put for Number, both often confounded under the name of Quantity, the How-Much,-and the remaining half of the Plan is carried out and preserved in full as shown in the following Diagram. It should be observed

> Diagram No. 80.

Type-Form or Primitice Outlay of the Human Hand.

that one Compartment in each Column of Compartments is assigned to the Attached or Fixed Nail, and one to the Free Nail ; every distinct variety of Differentiation being provided for in the Plan.
1040. The Process of the Abridgment of the Type-Form is this: One Half of the Entire Plan of Form is fully Explicated or developed in accordance with all the Minutiæ of the Details involved in the Plan, and this Half is representative of the Principle of Form. The other Half of the Entire Plan remains (partially at least) Non-explicated, that is, not subdivided or developed into the fullness of detail by which the first Half was characterized. This Non-explicated Half is then representative of the Principle of Substance; Substance and Form thus both represented or symbolized within the Precinct of Form merely. This completes the First Degree of Abridgment by Halving, or the First Power of Duism.
1041. By this Process, the Primitive Projected Distribution of 64 Compartments or Parts is reduced to 32 Parts plus some Part (or Parts) representative of Unity or Substance, the Measured Number of which is now to be accounted for. This Second Half does not remain merely One, (as in the Simpler Distribution of the Trunk disconnected from the Limbs), but undergoes a Subordinate Interior Distribution, as follows: Instead, first, of being Halved, by the First Power of Duism, it is Quartered, by the Second Power-this being a Secondary Stage of Distribution. Of the Fourths of 32 so produced, one only, equalling 8 , is retained within the Substancive Half of the Plan about to be carried out. The remaining Three Fourths are then entirely discarded or left vacant.
1042. The Third Degree of Abridgment then supervenes as follows: This Column still of Eight Compartments, (representing the Thumb, the Unitive Half of the Primitive Plan, now already abridged by Three Fourths), is submitted to a repetition of both the former kinds of Abridgment. It is, in the first place, halved-repeating the first variety of Abridgment above (t. 1040). Four of the Compartments then remaining full, the other Four, the remaining Half of this Column, is reduced to One full Compartment, by the rejection of Three Fourths of this Half,-repeating the Second variety of Abridgment above
(t. 1041). The Four thus added to the One make Five, as in the case of the Teeth noticed in the next following paragraph (t. 1043). The Eight is, in other words, reduced to Five. This is, so to speak, an exhibit of the Third Power or Efficiency of Duism, bifurcating, and adding to the mere repetition of the two former Exhibits of the Priuciple the new Aspect of the Duism of Difference or Contrast between those two.
1043. By the same Principle of Abridgment frequently adopted in the works of Nature, as in those of Man, the Adult Teeth are distributed as 32-Eight upon each (Half-) Jaw (t. 1036) ; while the Provisional or Deciduous Teeth (the Milk Teeth) are 20 in number,-or Five upon each (Half-) Jaw ; that is to say, they are by Abridgment reduced to the same number as the Nails of the Fingers and Toes. Teeth and Nails are, in one of the Aspects of Comparative or Transcendental Anatomy, ranged together as counterparts or complements of each other. Their typical number is then conjointly 64, reduced by the Provisional $\Lambda$ bridgment of the Teeth and the Perennial Abridgment of the Nails to 40. Eight Teeth of the Normal Set are found upon each Half Jaw, (really a distinct member), which is then an Analogue of one of the Limbs of the Trunk. The Jaws are the Limbs of the Head, a discovery which goes back to the Founders of Transcendental Anatomy, Gocthe and Oken. See again upon this subject the forthcoming Monogram of my own, entitled: "The Correspondential (Intercomparative) Anatomy of the Human Head and Trunk."
1044. The Bones of the Body are the Framework of the Body, and are therefore peculiarly the illustrative Domain of Form. The Spinal Column is the Grand Axis or Supporting Column of this Framework. This is, apart from its Pivots, the Skull and Pelvis, actually composed, as we have seen, (t. 956), of 24 Vertebræ, with the Composition, $12+12$. The Ribs or lateral Processes are also 24, in two Groups of 12 each ; each Group with a Composition like the Chromatic Musical Scale of 7

Principal, (the Long Ribs), and 5 Subordinate, (the Short Ribs), repeating the whole tones and the semi-tones of this Musical Gamut. (
1045. The Entire Vertebral Column extending from the end of the Coccyx to the end of the Nose, is constituted actually of 40 Vertebræ; the 16 additional ones being distributed to the Coccyx, Sacrum, and Skull, and there so modified artistically, or blended, or, as it were, partially smelted into each other, that it requires the closest of observation to disengage and identify them. For the performance of this labor the student is again referred to the Monogram just alluded to. This actual Number 40 is then, itself, an Abridgment from the Pure Ideal Typical Plan of the Vertebral Columin of the Human Skeleton, which extends to the Grand Typical Number 64, as the full Complement of Ideal Vertebra.
1046. The whole bony fabric of Man not only, but of every animal, as well as the muscles and nerves, and the organs and systems, is laid out, in rigorous accordance with a PrinItive Typical Plan, derived from the Typical Sectionizing of the Globe Figure, and then from a similar Typical Sectionizing of the Cube. The whole Carpentry of every organized body is thus devised or self-arranged, as we may choose to regard it, in orderly obedience to these Simplest and Most Primitive Divisions of Form. Whether it is urged, therefore, as the true theory of this subject that they are derived from the operations of Reason in the Mind of a Conscious Creator, or that Reason itself is a mere Echo in the Mind of Man from the inherent Necessity and Universality of these Primitive Congruities of Form, it is, for the purely Scientific result, wholly indifferent. The two Theories are brought into a complete reconciliation upon the Scientific Arena, from the fact that, under the operation of either Theory, the phenomenal result is the same. The conclusion is startling, but: May it not prove the Higher Morality and Religion of the subject also, that the Wrong or the Sin is not in holding either of
these most opposite poles of doctrine as Theory or Belief, but in the Spirit of Anathema, which denounces or condemns the individual who, from organization or state of development, finds in the opposite Theory, the highest mental satisfaction or rest? May it not also prove that the Compoundest Trinismal Truth is of a Largeness never, as it were, heretofore surmised, and that even the extremes of Theism and Atheism are yet to be spanned within the Arch of the Absolute Theology, as Necessary Aspects of a Doctrine too broad and too uni-variant in Nature for any single statement-a Doctrine which embraces Contraries as the Constituents of its Integralism ; as, between the opposite Poles of the Earth, the Earth itself is constituted and contained?
1047. So, in the Mathematics, the Zero is as necessary as the Positive Numbers, and while it is negative and adverse, and privitive of Positive Values, in one set of relations, it is not only essential even then, but the relations being changed, it becomes augmentative of Positive Values in a proportionate degree. We should soon discover our folly if we divided ourselves into sects devoted to the exclusive defence of the number One, of the Number Two, of the Number Three, and of Zero, respectively. Yet, Is not this precisely what the world has been doing, substituting for the numbers themselves the Spirit of those numbers, or the Principles of Being, for which those numbers stand representative ; and have not ages of ages of bloodshed and dissension been the price at which we have indulged in those puerile differences ?
1048. Still the dissensions of mankind have been in turn fitting and appropriate as the rude means of development for the period to which they have belonged, which was the Incoherence of the Incipiency of Humanity. Perhaps that chaotic stage has for its numerical Analogue that Indeterminate Numeration, rather, which precedes, as it were, the orderly and seriated distribution of numbers ( $\mathbf{t}$ 217). In that early age of disharmony and incoherence through the partial under-
standing of Truths, the highest and the holiest sentiments of Mankind have been evoked, enlisted, and trained for their ulterior destination, in the defence of the particular phase of truth which was perceived by the individual mind, or around which a special sect could be rallied. The love of truth did not, in those days, come to bring peace upon earth, but a sword, while yet by a sublime paradox he who bore it in his heart pre-eminently could with propriety be denominated the Prince of Peace. The grand reconciliation of all differences without the destruction of the differences themselves, in an infinite, practical Uni-variety of Co-operation between Sameness and Differences in all Spheres,-as the different members of the Body concur in the formation of the Body, -can only come through Science, and then only through that Science which is Universal, or the systematic understanding of all the simple Principles of Being, and of the Laws of their complex relationship to each other.
1049. From the Typical Plans or Type Forms, from which Nature takes up her line of operations, and which lie, as it were, back of Creation itsflf, the Concreted or Elaborated Body of Nature, the Creation as such, is gradually wrought out by a wonderful succession of Artistic Modifications.

105ั0. Nature proceeds precisely as the Carpenter, or the Dress-Maker, or other Artisan, who first cuts out his or her work by a regular type, sample, measure, model, or pattern, and then elaborates, modifies, and completes, by paring or trimming, by piecing out occasionally, and by crimping and convolving in a thousand ways, to fit their work for its ultimate uses. To rediscover the Primitive Patterns from among these Infinite Heaps of Complexity is the Supreme Triumph of Scientific Research.
1051. Type Forms are of three kinds: Initial, Middle or Medial, and Final. Final Type Forms are Teleological. They are the Artistic Ideals-that which the producer is aim-
ing to secure as the ultimate effect and perfection of his labor and art. Initlal Trpe Forms are the Primitive Outlay of the Pattern, in accordance with which the labor is to proceed; or rather that by which it is to be ideally guided. These are what have been denominated Archetypes. Medial Trpe Forms are certain Standard and Measuring Forms attained to midway between the Primitive Outlay and the ultimate realization of the ideal perfection.
1052. Natural Development corresponds with an Actual Process of Elaboration, with the doing of the work, as the building of an edifice, for example ; the labor of the Builder as distinguished from that of the Architect or Planner. This does not accord with any of the Type Forms, but is a Naturismal and irregular procedure, sui generis. It proceeds normally and ordinarily at an inclination or slant, or diagonally related to the Primitive Type Plans. The bricklayer, for instance, does not begin to build by laying a tier of brick all along the foundation, but, on the contrary, he selects a corner, and builds up upon it to a considerable distance, slanting down his work, at the two sides towards the base. This sliezed or biased, or oblique or inclined Variety of Movement or Operation is characteristic of the Naturismus of the Concretismus, and hence of the Observational facts of Existence throughout the Universe of Being, traversing, and contrasting with, the regularity of the Typical Plans, which are the Scientismus, the Abstractismus, or the Ideal Principles of Being. This Principle is formulized as:

## The Sketwism or Scalentsm of the Naturismus.

1053. It is in this Naturismal and Inclined, and as it were, Irregular Actual Development of Being that the ordinary Naturalists are making their observations. The Type Forms, as aside from and back of these, and as adduced from the necessary Laws of Form, and yet presiding over the natural development itself, as the Plans of the Architect preside over the
operations of the Builder, constitute the Department of Transcendental Natural Science, as of Transcendental Anatomy, for instance. It is to this, as the higher Department of Natural Science, that the Morphology of Universology opens a broad passage-way to the Scientific World. c. 1-4.
1054. This Subject of Type-Forms or Primitive Ideal Patterns of Being is immensely fruitful of future results in all the Sciences. In an important sense, it is with this Discovery only, that Science, properly so called, actually begins,-that is to say, that it begins to be constituted in an orderly way, from a priori Principles to Determinate Ends,-as God and Nature have proceeded in the elaboration of their work. It is one of the many subjects, however, which can be barely sketched in this Basic Outline of Universology. I have otherwhere, in manuscripts and in my own unwritten reflections, traced out the method far enough in its expansion towards the infinity of particulars, to furnish, if detailed confirmations

Commentary, t. 1053. 1. The following statement of the Darwinian or Natural Development Theory is extracted from an article on that subject in the Atlantic Monthly for October, 1866:
"The Darwinian theory is erected on the primary foundation of a Natural Law, acting through all time,-a persistent force which is applied to all creation, immutable, unceasing, eternal; which determined the revolutions of the igneous vapor, out of which worlds were first evolved; which determines now the color and shape of a rose-bud, the fall of the summer leaves, the course of a rippling brook, the sparkle of a diamond; which gives light to the sun, and beauty to the woman's eye. It rejects utterly the idea of special creation, and maintains that the globe, as it exists to-day with all its myriad inhabitants, is only one phase of that primeval rapor which by the force of that law has reached its present state. As a little microscopic egg becomes in time a fullgrown, living, breathing, loving animal by the operation of natural lavs which we term grooth, so has the Universe, with its denizens, become what it is by the workings of Natural Law."
2. The author of the "Vestiges of the Natural History of Creation" sums up the hypothesis which he seeks to sustain thus:
"I suggest, then, as an hypothesis already countenanced by much that is ascertained, and likely to be further sanctioned by much that remains to be known, that the first step was an advance, under favor of peculiar circumstances,
were necessary, the most orerwhelming convincement of its universal validity. It will be the labor, not only of my own future, but of the whole Scientific and Practical World, through future ages, to trace out and apply the doctrine in its limitless minutise of detail. The Law is one and uniform in its operation, but the modes of its outworking and manifestations are infinite. We have, in fine, before us, for elaboration, a new Abstract and Exact Science; a new Mathematics or a new Logic, the counterpart and equivalent of the Mathematics and the Logic of the Past. Such is the Science of Analogic, now undergoing development.
1055. As the Typical Plan of the Distribution of the Main Column of the Human Skeleton distributes it into 64 Ideal Vertebre, which number is the Second Power of the Typical Eight, so the entire number of bones in the actual constitution of a Compound Individual, including a man and a woman, or one of each sex, is 512 , which is the Third Power or Cube of
from the simplest forms of being to the next more complicated, and this through the me lium of the ordinary process of generation.
3. "That the simplest and most primitive type, under a lano to which that of like production is subordinate, gave birth to the type next above it; that this again produced the next higher, and so on to the very highest, the stages of adrance being in all eases very small; namely, from one species to another; so that the phenomenon has always been of a simple and modest character."
4. All of the above statement relates still to Actual Processes of Natural Decelorment. The term Type, as used in this sense, has a quite dificrent meaning still from that which is assigned to the term Trpe-Form, throughout the present work. It signifies merely that which is Central and Modelic in any range of Development, as the Fact revealed by Observation, and as a part, therefore, of the merely Observational or Naturismal Scicnces of the sulject; whereas by Type-Form is meant a Necessary and Inienent Truth of Geometry and Loaic governing and controlling the Natural Decclopment, lying back of it, and cxisting in the Nature of Thought iteslf, and Thence or secondarily in the Nuture of Timngs. It is therefore a part of the Exact Sciexce of Being itself. Natural L/aw in the mouth of the Naturalist, means, therefore, something far lower in rance. no matter what degree of Expansion may be given to it, than Law and Type-Foms in the Transcendental sense of those terms. It is of the utmost imjortance that these two conceptions be first clearly explicated and their reconciled.

Eight. This embracing of the two Sexes in one Typical Arrangement or Primitive Framework again reminds us of Plato's averment that the Man and the Woman were originally hemispheres of the same Sphere ( $\mathbf{t} .322$ ). The number of bones within the single individual may, it is true, be reckoned somewhat variously, and Anatomists have never been able to agree entirely upon their numerical classification. By the following arrangement there are precisely 200 proper bones, which, with the addition of 56 teeth, deciduous and permanent, complete the required census of 256 , the half of 512 .


105̃6. The trivial unattached bones, the Ossicula Auditus, and the Sessamoids, are, indeed, omitted from this count. I take them to be the Representations, in the Scheme, of a foreign Element wrought in, by Artistic Modification. The more extended theory of the Subject must be omitted here. So also the Milk Teeth are reckoned as one more upon each Half Jaw than the usual number, by Analogy with the tendency of the Hand to yield Six Extremities in the place of Five. In fine,
these are Final or Teleogical, the Third Class ( $\mathbf{t} .1051$ ) of, Type Forms, and these result always from a struggle between the Rigorous Exactness of Archetypes and the Counteracting Freedom of Naturism. It is Archetypes only which belong within the Exact Science of the subject. It is for this reason that Anatomists have never been able to agree on the Osteological Classification, and that even here some ambiguity remains.
1057. Other methods of carrying out the reckoning of the Bones of the Human Body reveal other and various Analogies with Number and Form which are far too extensive, and many of them too obscure for an elementary treatise. The distribution of the Bony Framework of each Vertebrate Animal, and of the Rings and Plates of Inferior Animals, is an Analogical Hieroglyph of the character and uses, or, so to speak, of the meaning of the animal. The same principle extends, with infinite variation, to all the other parts of the Body, and to the Vegetable and Mineral Kingdoms as well. The Fashion of each Leaf is a sermon on Morals, on Politics, on Roligion. The Polarity and Cleavage of each Crystal is a demonstration in each of the Sciences. A discovery in any Department of Human Thought will, from the time when Universology is familiarly understood, flash instantly round the whole circle, and be a discovery, equally, in every Seientific Domain; and such Unification of the Knowledges will be the precurser of the True or Composite Unification of the Sentiments and Conduct of Mankind. (t. 1057).
1058. We have now completed this review of the distribution of the Globe and the Cube as the Morphic Measurers of the Universe, in that lower order of measurement which we call Cosmical. A word only can be given here to the Egg, as Typical in the Art Department of Cosmical Nature, resulting as it does, ideally from the Combination of the Globe and the Cube (t. 784).
1059. The Germ within the Egg combines and repeats the Round Point and the Straightened Point, the Minim of

Globosity and Cubosity, as the Egg itself combines and repeats the Globe and the Cube.
1060. The Germ is the Type of Intuitive Genius. The Germination Point of Genius is the vital and generative Principle of Art. "The Poet is born, not made." The term Genius is etymologically from the same root as genesis or birth.
1061. The Chalaza or twisted cord which connects the yolk with the apex of the shell is spiral, or blends the principle of the Straight Line with that of the Curve, and is typical of inspiration, as that which is co-operative with, and which sustains, the genius of the artist.
1062. The Membranes enclosing the substance of the Egg, and hiding, as it were, the secret processes of Nature, partially round and partially elongate, repeat the corresponding types of Surface, and correspond with the Veiling or Obscurity of the Processes of Art, as, for instance, the Machinery of a Theatrical Performance is concealed by the Curtain of the Stage.
1063. The Substance of the Egg, and its Outline, (Substance and Form), correspond with Solidity, (the Globe and Cube blended), and with Fabric or Construction, as Grand Art. The Egg is, in this sense, the Mass or Bale of Materials, which is about to be differentiated into the Vertebrated Structure of the future Animal.
1064. These considerations recur more obviously in the Vegetable or Tree. The Bud, (button, flower, seed), repeats the Point and the Germ. The Tendril repeats the Spiral Line. The Leaf repeats the Surface ; and the Stem or Wood repeats Solidity. The Tree is the especial Type of these differentiated elements of Limitation. We pass now to a re-statement of Anthropic, in its connection with Cosmical, Form.
1065. More comprehensively, and back of this detail, the Mineral Kingdom, as a whole, is the Concrete Type, Symbol, or Hieroglyph, of Abstract Substance,-Massive, Rotund, Inorganic, (with a Subdominant Element of Crystalline Rectism) ; the Vegetable Kingdom is the corresponding Representation
of Abstract Form, or Pure Limitation, (with a Subdominance of Rotundism in the circumference of Stalk and Limbs). The Tree is nothing else but a Concrete Presentation of Point, Line, Surface, and Solid,-distributed in Typical Branchiness, or Complex Linear Outline, against the Background of the Sky. Finally, the Animal Kingdom is the Similar Embodiment of Morement, as also of the Compromise, Reconciliation, and Harmony, of Substayce ayd Form. The Mere Animal repeats Substance in Preponderance, and Man (the Race) repeats Form, (Idea), or the Ideal Perfection. Within Humanity, Max, Male, repeats Form, hence Man (the Race) and the Tree, ("the Cedar of Lebanon"), and Woman rerepeat Substance, and Mineral, and Cosmical World.
1066. The Cosmical Type of Form (Globe, Cube, Egg) has relation in preponderance to Philosophy, which goes back to Generals and Universals, and is, in the minor sense only, practical. It is the Earthy Substance, the Non-Explicated Ground of Knowledge.
1067. The Anthropic Type of Form, Man,-the Anatomized Body and the Family Group,-has relation, on the contrary, in preponderance to Echosophy, since the Positive Sciences ally themselves with Speciality, and the wants of Man, and therefore with Anthropology. It divides, like the Tree, into Branches, which are the Special Sciences.

106S. Finally, Nuptial Form relates to the Union of Substance and Form in the Harmony of Movement ; of Mineral and Vegetable in the Production of the Animal ; of World and Man in the production of the Universe, and, it may be added, of Something and Nothing in the production of Being itself. Man has been at first represented (Dia. No. 1, t. 5) as symbolically standing upon, and treading beneath him, the Earth or World as a Footstool. Subsequently; (t. 994), and here again now, Man is represented as the Husband (or as we say instinctively the Husbandman) of the Earth, entering into Nuptial relations with her, mastering, and impregnating, and enjoy-
ing her as his bride. Science is challenged to the removal of this seeming contradiction of Analogies, and responds to the challenge by adverting to the fact that the Cock, the typical Animal of Gallantry and Sexual ralationship, combines these two methods in the triumph of his love. It is in the profound study of the Amative Methods of all the Animal World, and of the Vegetable World below it, that the Central Arcana (Secrets) of Science and Human Happiness will have ultimately to be sought.
1069. If we recur to Numbers, the fact will be recalled that we have certain General Indeterminate Distributions of Number before we arrive at their specific Distributions into Numeration and Summation. We have, for example, Indeterminate Numbers properly so called, as One, Many, All, before we arrive at Determinate Numbers, as 1, 2, 3. We have then Round Numbers which have a relation to Round Form ; namely, Numbers proximately exact, but not squared by any precise count or calculation. We have Values and Functions (Arithmetic and Algebra). We have Pure Mathematics and Applied ; Direct Processes and Inverse, etc.
1070. The Single Integer or Unit, the Number One, (1), is at the same time the lowest and inmost converging Apex of the whole Series of Cardinal Integers or Whole Numbers. It is, as it were, the Single Primitive Cell or Least Atom of Number relatively to an infinite accumulation of other Cells or Atoms -the Groups of Integral Units above it in the Series. It is the Analogue of the Physiological Primitive Cell ( $\mathbf{t} 203$ ).
1071. This Primitive Single Unit is, however, at the same time, a Total Universe of Number in itself alone, relatively to the Fractional Parts and Infinitesimals which are contained in it, and which are just as numerous on to Infinity, farther inward and downward, as the Numerousness of the Integral Units, above and outward, on to Infinity in the opposite direction. This Internal Infinitely Minute World of Number within the Bowels of each Single Unit, and so aggregately,
within the Interions of all Number, is the Analogue of the Real or Concrete Spiritual World, Situated Internaliy to each Primitive Cell and Aton of the Outer Material World, and so collectively, in a quasi-incomprehensible sense, within the Outer Material World itself. This is an Arcanum too subtle, and opening into a field of scientific speculation too extended, for the present occasion. The simple statement must for the present suffice.
1072. The Single Unit-the Number One (1)-is therefore a Hivae or Turning Point, between two Orders of Development, the one Objective and Gross, the other Subjective and Fine, and each ending upon Infinity; with a suggestion, ultimately, still, of the Convertible Identity, in some mysterious way, of the Infinity of Greatness and of the Infinity of Minuteness.
1073. In order the better to conceive the Interior Development of the Unit, (the Fractionizing of itself), it will prove convenient to withdraw this Central or Hinge Unit partially from its connection with the Mass of Integers to which it is related, without, however, entirely severing the connection, and to magnify it in Thought, after it is so withdrawn from its position in the Series.
1074. It will be still further convenient, then, to invert the whole order or series, so as to bring this extracted and magnified Central Unit forward and at the top. The old Series of Integers will then fall backward and below, as a Train or Trail or Trunk, while it, with its interior distribution of Fractions and Infinitesimals, corresponding inversely to the exterior distribution or Train of Integers, or Whole Numbers, becomes the Head of the Train.
1075. The Single Unit is then a Head, and the remainder of the Series a Trunk, in rude imitation of the Human Body. But the immediate Analogy here is, not with the human body as such, but with a train or troop of men, as an Army, for instance; with its General or Chief as its Head.
1076. The Analogy for the Human Body as such is wrought out of the Single Unit alone, as follows: An Infinitesimal or Least Fraction in, so to speak, a First Order of Infinity, is taken now as representative of the Primitive Unit, the previous Primitive Unit being then assigned to the representation of the whole body of numbers, taking the place, in other words, of the Train or Trail or Troop represented by the Sequential Series attached to the first Primitive Unit when it was regarded as Head. The new Primitive Unit is then a Centre or Core of the former one, and when abstracted or pushed out of it without entirely destroying the connection, it becomes a Head to it, which is now a Trunk reproducing, in determinate Singleness of Form, a Human Figure, Head-and-Trunk-like. This
Diagram No. 81.

Fig. 1.
TROOP OR SERIES.


Fig. 2.

## INDIVIDUAL.


repeats the General and his Army, or the Object and its Train, whatsoever it be, as Head and Trunk. The above Diagram illustrates these two varieties of Anthropic or Head-and-Trunk Form.
1077. Nature has developed the Head by pushing it out, so to speak, from the interior of the Trunk. It is an Analogue, as we have seen, of the Foctus, and is almost literally a son or child of the Body. The effort of all animated Nature is towards Cephalization, which begins far down and very imperfectly, and ends at the height of development with the Brow of Jove. a. 1.
1078. The primitive position of the Head ideally conceived of is indicated in Figure 2 by the small dotted circle; but this in turn is an enlargement of the central Point which is our infinitesimal Unit. The enlargement of this Dot or Point should be conceived of as taking place interiorly somewhat as the rays of light which enter at the pupil of the eye, decussate as they enter, and then expand within the chamber of the eye. An increased subdivision or assignment of parts, to that which by the previous theory is already infinitely small, can only occur in this way. This Subject is, however, exceedingly intricate, and I havdly hope to render it tolerably intelligible by this mere allusion, while yet no more space can be afforded to it here. It must suffice to add that the fibrous and gray matter of the brain is the Analogue of these infinitesimal Subdivisions of the Unit already assumed as infinitely small, and that we open up here the obscure avenue to the deeper philosophy of Spiritual Phenomena, the infinitesimal Dynamics of Homœopathy, (the Principle of Potentializing by Infinite Differentiation), and finally, of Phrenology, at the point at which, as previously noted, it needs defence from the grosser physiological criticism (t. 622).
1079. It is the Sectorizing of the infinitesimal circle at the centre by the converging rays from the periphery of the larger circle entering into this Womb of Infinity and crossing each

[^90]other as they enter, which furnishes the Type of the Nerve Fibres of the Brain, and which accounts also for their decussation or crossing at the Neck, as they return from the Brain to act again upon the outer mass of the Body.
1080. It is, on the contrary, the Segmentation of the larger circle representing the Body itself, and especially in its primitive Stage or quartering, which is representative of ordinary fractions short of infinitesimals. These two are then the Types respectively of Psychology or Subjective Mind-Science related to the Brain and Nerve, and Physiology including Anatomy, the Subjective Body-Science related to the Flesh and Bone. We are thus carried back to the Symbolic Significance of Figure 2, in the Diagram of the Anthropic Type-Forms ( N o. 73, t. 965).
1081. Figure 3 of the same Diagram is then representative of Sociology, and Figure 1 of Monanthropology, including Phrenology, as previously shown.
1082. The origin of the Nuptial Type-Forms, as the blending of the Ovarian and Anthropic Types of Form, is sufficiently obvious, and need not further detain us.
1083. We pass now from the consideration of Form Proper, up to the consideration of Direotion, which is a higher department of the Domain of Limitation, or of Form in the larger and inclusive sense ; for which, however, we have now so much preparation that it need not detain us long here; although in a subsequent work it will assume a paramount importance.
1084. Form Proper, or Figure, is Absolute Form, or such as concerns the Self-Constitution of the Individual Object by lines and surfaces interposed between the points of Position, Distance, and Situation, involved in its constitution.
1085. Direction is, on the contrary, Relative Form, or that Inter-relational Figure described by the lengthwise extension of the Lines, which connect object with object, or the object with the different fixed Points of its medium or surroundings.
1056. Morphic Composition, the Special Domain of the artist in respect to Form, is then the Composity, Union, or Interblending of Form, (as of Figure), and Direction.
1087. In other words, Form (Figurate) is the Unismal, Direction the Duismal, and Morphic Composition the Trinismal Department of the Grand Domain of Form, as the Total Antithesis of Substance in the Constitution of Being.
1088. Figurate Form involves in preponderance the Sidevise or True Limitative Function of the Line, and this again corresponds with a Lateral Horizontality of Direction, as when we stand opposite a barrier or any Base Line, and look over or across it. Direction involves, in preponderance, the Lengthwise or Connective Frunction of the Line, which corresponds with the Height or Up-rising Distance of Perspective, and thence with Perpendicularity of Direction. Composition, or the Interblending of these two, hence, coincides with, and demands, the Triangle as its Type of Form,-a postulate of Art which is known to every Artist. Triangular Figure is derived from the Horizontal and Perpendicular with the addition of the Hypothenuse, which is the Line of Inclination or Compromise, and hence of Graceful or Artistic Concession. The Horizontal or Basic and Governing Line is Scientismal. The Perpendicular or Existential Line is Naturismal ; The Inclined or Concessive Line is Artismal. This last is also a Surface Representative of the Protensive or Forth-Stretching Line, (the Fore-and-Aft Horizontal), which would, in itself, arise perpendicularly from the surface of the paper. This Protensive Path-way or Methodic Line is then the Analogue of Action, which is repeated representatively, as Art repeats Action, by the Inclined Line or Hypothenuse ( $\mathbf{t}$.
1089. Direction, in its practical aspect, that of Standard Position, or Determinate Lines or Axes of Being, or the Car. dinism and Ordinism of the Cosmical World; Horizontality, and the Four Grand Cardinal Points of Direction, North, South, East, We.st; Perpendicularity, etc.,-will come up
for consideration in the Incipiency of the Structural Outline of Universology, and may, therefore, be dismissed for the present.
1090. From Morphic Composition, as the Artistic View. of Form, the transition is easy to Arto-Philosophy, for the position of which in the Hierarchy of Knowledge the student is referred to the Typical Table of Existence (No7, t.40). ArtoPhilosophy must not be confounded with the Philosophy of Art, any more than the Philosophy of History with the History of Philosophy. What is meant by the term is the Compound Resultant of the Unition and Interblending of ScientoPhilosophy, as the Spirit and True Basis of Echosophy or Positive Science, with the Naturo-Metaphysic of the older Philosophy, in the production of a nero development of Metaphysics, permeated by the Spirit of Science.
1091. Arto-Philosophy will develop itself like all other Departments of Being, in Three Successive Stories or Degrees, -Unismal, Duismal, and Trinismal, respectively.
1092. The True and Normal, which is the Scientismal or Duismal Degree of this Philosophy, and which rests basically on Sciento-Philosophy, now only in its own first stage of development through Universology, can therefore only be properly founded after Universology itself shall have received its competent exposition and appreciation.
1093. It will then consist of an Exactifying of all Naturometaphysical speculation by bringing it into precise relationship with the Typical and Normal Discriminations of Universology, and especially of Sciento-Philosophy, as ITS abstract basis.
1094. The Trinismus or Artismus of Arto-Philosophy will in fine consist of a free or less rigorous interblending of this exact Department of Arto-Philosophy with the Naturismus of the same Philosophy now presently to be characterized; coupled with an intermingling of illustrations from Fancy or the Afflatus of Poesy, so as to produce the highest style of

Poetico-Philosophical and Intuitional Writings. I hope soon to tender as my own effort at the illustration of this style of the treatment of Ideas, the Exposition, now approsimating to completion in manuscript, of the Revelation of St. John.
1095. Returning to the beginning of this Trigrade Scale, the Unismus or Naturismus of Arto-Philosophy is that instinctual and precocious effort at the constitution of such a Philosophy without awaiting the one condition absolutely necessary to its perfection; namely, the discovery of Universology as an Exact Science-then to be employed as one of its Factors. This effort is now in progress, and constitutes the latest phase of Philosophical Literature. A few words must be given here to its description and appreciation.
1096. When Comte, as the Special Encyclopedist and Digester of the Positive Sciences, pronounced his verdict of Uselessness and Impossibility upon all Pure Metaphysical pursuits, there was a time when it seemed that Metaphysics had suffered a shock past recovery, and that Echosophy alone was hereafter to occupy the attention of the thinking world. Lewes, as the disciple of Comte, dealt sturdy blows at the dying giant (so supposed to be) in whose service he had spent a lifetime of devoted labors. This drift of opinion begins already, however, to change, and Metaphysical Studies are evidently reviving in individual minds of great power. Lewes himself found it necessary to dissent from the verdict of Comte in relation to Psychology, which that Master had treated as a mere accessory of Biology, and to vindicate for it a distinct place among the Sciences; and Psychology always verges upon the abstrusest of Metaphysical reasoning.
1097. Still an important impression has been made, by the criticism of Comte, upon this new and incipient Metaphysical Development. This is already obvious even in the writings of Hickok whose speculations are evidently chastened, not only by the general spirit of Science, but by the fact that he is aware of writing in the presence of the Positivist criticism.

I have employed Hickok, however, from his more characteristic development of the idea of Force, as one of the representatives of the Artoid Stage of the Naturo-Metaphysic.
1098. As representatives especially of this Naturismology of Arto-Philosophy I will mention the writers of the four following works, all of them American, and of recent origin, and which have met, I presume, with but few readers as yet either at home or abroad. Some of these works have been quoted from, and commented on, in the body of this work: "Philosophy as Absolute Science, founded in the Universal Laws of Being, and including Ontology, Theology, and Psychology, made one, as Spirit, Soul, and Body;" by E. L. \& A. L. Frothingham. "Vestiges of Civilization ; or, The Etiology of History, Religious, Esthetical, Political, and Philosophical ;" anonymous. "Substance and Shadow ; or, Morality and Religion in their Relation to Life : An Essay upon the Physics of Creation;" by Henry James. "Optimism, the Lesson of the Ages ;" by Benjamin Blood.
1099. In this order of writings belongs also a recent English work entitled, " Organic Philosophy ; or, Man's True Place in Nature"-Epicosmology by Hugh Doherty, M. D., and another English work by J. J. Garth Wilkinson, entitled, "The Human Body in its Relations to Man ;" and still another entitled, "The Divine Drama of History ;" by the Rev. James E. Smith. Others doubtless may have escaped my attention, or may not now be in my recollection. To these may be added the whole body of modern Spiritist Literature.
1100. Of all the works named above, the most remarkable from the point of view now under consideration are the first two: "Philosophy as Absolute Science," and "The Vestiges of Civilization."
1101. The former of these works touches the highest point of Intuitional Generalization, and marks an epoch in Metaphysics. If it has not been understood and appreciated, it is either because, in its abstract principles it transcends the
mental habits of its reviewers ; or that there is some failure in the clearness of the exposition; or, finally, that the deductions of the authors, whether legitimated by their premises or not, are too offensive to prevailing opinions.
1102. While in this work there is a great advance upon all previous Metaphysical Insight, and a drift outwardly towards Science, the term Science is in strictness wholly inapplicable to it; for it is the distinctive characteristic of Science, properly so called, to begin in determinate particularity, and not in broad generalization, which is the especial ear-mark of Philosophical Speculation. These authors haring no types of a Scientific Character with which to compare, and by which to measure the complications of their primitive Abstractions, they have in common with all merely philosophical Thinkers, no canon of criticism upon their own thinking, no adequate Chart, Compass, or Rudder to guide them when they enter upon the field of practical applications.
1103. The Basic Idea of this work is the distinct recognition and affirmation of a Law of Unity, of a Law of Duality, and of a Law of Trinity, co-operating with each other, as the total account of the Causality of all the Phenomena of Being, whether of God himself, or of the Universe of Matter and Mind. This recognition of these Principles, while it is not scientifically, but only intuitionally based, still completely accords with Universological Science. What these writers distinctly see for themselves, though they would have extreme difficulty in proving it to another, is exactly identical with the three Principles, Unism, Duism, and Trinism, propounded herein. The Principles are, however, seen by them primarily and in preponderance in the region of that High Generalizing Speculation to which the Philosophic Eye is prone erer to direct its vision. Hence they begin not with the Simple Numbers themselves, as an Alphabet of Pure or Transcendental Science; the Only Method capable of DemonstratnNG the Lavos of Nature as an Exact Reflect of the Laws of

Mind, and so of furnishing us with a complete Speculative Physics, -but with the High and Vague Considerations of the Infinite and the Finite, the Absolute and the Relative, the Constitution of the Being of God, etc.
1104. In the Universal Logical Method, these High Speculative Considerations, while they lose nothing of their transcendent importance, are the Teleology or Finality of Science. They are, in preponderance, postponed to the last, as the point to be worked up to, through the whole Series of Sciento-Philosophical processes; so that when reached they shall no longer be the subject of possible doubt, no longer rest in the category of Opinion or Belief, nor even of Intuitional Perceptions, the Special Endowment of some men, but shall take their rank as Common Knowledge, addressed to the Universal Faculty in Man, and as the Highest Range of Scientific Demonstrations (a. 33, t. 198).
1105. The work entitled "Vestiges of Civilization"-a title imitated from the "Vestiges of Creation," is, perhaps, the nearest approach to the actual discovery of Universology which has been made, apart from the discovery itself. The author, who has not given us his name, had evidently profoundly appreciated, if he had not completely digested the former Philosophies over the whole wide divergency from Kant and Hegel to Comte; and from their materials, with a rare originality of his own, he passes over to considerations of Number and Form closely allied with those which have occupied us in the two preceding Chapters. He exhibits a mere glimpse, it is true, of the immense Ocean of New Truth lying in this direction, but enough to give to his work a distinctive character which finds no parallel in any previous writings. c. $\mathbf{I}$.

[^91]The style is crude, hurried, and involved, and the whole work seems rather the improrisation of a Sciento-philosophical Genius, than the result of a patient life-time of Analytical thinking.
1106. The work of Mr. James assails in his striking, brilliant, and peculiar style, the highest problems of Life and Duty. He is the founder of a modified School of Swedenborg's doctrine, bringing down the Mysticism of the Swedish Seer into the sphere of the ordinary uses of Sociological Science.
1107. Mr. Blood's book is a less pretentious volume, but one which has in it some valuable and remarkable thonght. Another American book, the work of Professor Draper, "The Intellectual Development of Europe," like the "Vestiges of Civilization," has for its tonic idea the perception of Pascal, that "Humanity is but a Man who lives perpetually, and learns continually." This was also the farorite idea of Fourier.

110s. Dr. Wilkinson's book holds an intermediate position between Swedenborg and Physiology, like that held by James ' between Swedenborg and Sociology. The work of Dr. Doherty bears traces of the School of Fourier, of whom he was for many years a laborious disciple. He is now, as well as Arthur Young, of the same School, and Albert Brisbane, the Translator and American Publisher of Fourier's works, opening out new arenues for individual originality.
1109. Modern Spiritist Literature is already an immense body of writings, covering a great variety of subjects. No more distinctive and remarkable assemblage of Literary productions ever existed. It is characterized, on the whole, by some monotony, and even platitude, of style and conception;
nearly upon my own; so much so, indeed, that, had I fallen in with them earlier, I should have enriched the present work with some contributions from those sources. On some subsequent oceasion I hope to recur to them, both for the purpose of acceptance and criticism.
but within and among it are treasures and gems of the rarest value. There is an unparalleled breadth and daring in the scope of its speculations. It is penetrating and critical in its Philosophy, humanitarian and prophetic in its tendency, and utterly novel and surprising in the method of its production. The writings of Andrew Jackson Davis, considered merely in this latter respect, are a standing miracle. The Poems of Lizzie Doten are enough to puzzle a conclave of Sages who should begin by not admitting the simple profession of the authoress to be a Seeress or a Medium for the Inspiration of the Deceased Poets, whose styles of writing she so marvelously reproduces.
1110. In conclusion, I revert again to the Logical and the Natural Orders, to which the attention of the reader was primarily directed at the opening of this treatise, (t. 6), and which have been discussed in part a few paragraphs further back ( t .955 , 956). It is, in the Grand Sense, The Logical Order of Universal Evolution, when we proceed from Primitive Type-Forms, outward and downward, through successive Artistic Modifications, to Ultimate Completion. While this Order of Conception antagonizes, it does not deny, and from another Point of view affirms even, the opposite doctrine called "The Development Theory," as propounded by Lamarck, by the author of "The Vestiges of Creation," and, at this day, especially, by Darwin. This last is the Natural Order of Evolution, predominantly in Time. The Natural, Temporal, or Historical Order is opposed to the Ideal (Type-Form) or Rational-Spiritual Order and Theory or Form of the Conception. It ascends, as it were, from the Feet and Loins to the Head, while the latter-Reflected and inverse, from the Naturismal Point of Vievo, but prior, original, and creative, from its own Ideal Point of View-descends from the Chest and Browo, or from the Head to the Feet (t. 6; c. 8, t. 9).
1111. Both these Orders are essential to any Completeness of Theory, first in their Oppositeness and

Difference, and finally in their Reconciliation, Hatmony, and Co-operation, and as Supplementary to eacif other. To supply the Philosophic Ground of this Complex Unity is the office of Integralism. Tiis Ultimate Conciliation of Contraries is the Universal Type of Harmony. The Diverse Views which are entertained, for example, by different Minds, upon the Being and Nature of God, or of the Supreme Governing Potency of Creation and Administration in the Universe of Being, are destined, through Universology, to a similar adjustment. The devout Catholic, the orthorlox Baptist or Quaker, and the conscientious Atheist, will shake hands with each other, and find a newo and intense bond of Unity in their very differences. Each will come to know, and love to recognize, that the other has wrought, with an echoing fidelity to his own, in another department merely of the Grand Fabrication of the whole Armory of Truth. The Universe of Fact and Principle was simply too large, and the Aspects of Truth too multifarious, to be mastered by the Infancy of Man. The New Catholicity of the Adult Age of the Race can alone compass them. THE GRAND RECONCILIATION, THE CROWNING HARMONY of Humanity, could only be led in by the Radical Discover? of THE UNITY OF. ALL INTELLECTUAL CONCEPTIONS. (t. 1046, 1120, 1121, 1122.)
1112. Our Different Theories of Theology and Creed express, not merely our Intellectual Conclusions, but our Organic Differences as well. Some men are, Naturally, or by Organization, Catholics ; some, Presbyterians; some, Methodists. It is alike undesirable and impossible to convert all men to the same Faith, except in respect to that General Groundwork of Truth which founds their Differences, as it does also provide this basis of Unity-the Unity of Reconciliation and Mutual Acceptance in the Midst of timeir Diversities.
1113. With the comprehension and assimilation of this

Grand Universal Truth, Religion will turn from the stanch defense of Particular Dogmas, to the Consideration and Culture of the Infinite and Divine Harmony between diverse and, chiefly even, between the most opposite Doctrinal Manifestations. The Two Orders of Development in the Natural Universe will furnish the Normal Type of this Grand Doctrinal Adjustment. The Infinite Variety in Unity of the Divine Plan, in the Visible Creation, will be recognized and glorified as shadowing forth the Ultimate Solution of all our difficulties arising from Organic and Educational Differences. Men will come to love each other greatly in proportion as they are contrasted in their Creeds, and have something mutually to give ; and not, merely, upon the low ground of their monotonous resemblances. The Harmony of Contrast is more difficult to achieve thay Harmony from Likeness or Affinity; but when acmeved it is proportionally higher in rank, and grander in all ways, in its results; while yet both have their respective and equally worthy parts to perform. These are a few hints merely upon the Ulterior Applications of Universology, and its accompanying Philosophy of Integralism. It may be, nevertheless, that to some Minds, the immense possibility of Univariant Reconclliation and Uliterior Harmony will, on these mere suggestions, develop themselves into superior proportions. (t. 1057.)
1114. Let it not be supposed that the preceding statements are made in the spirit of the loose and untenable doctrine: That it is of little or no importance what men believe, provided only their hearts and intentions are right. On the contrary, it is held: That it is of the utmost importance What men believe, and that Men should believe the Truth. What is meant is something very different; namely, That the Truth is itself so much larger, so much more many-sided, so infinitely more Complex than any of the Sects have had it in their Thoughts even to conceive of,-instead of being merely simple as it has been hitherto almost universally assumed to be,-that it
has required the Antagonism and Divergency of All the Doctrines to declare it eveen, first in its Diversity and Fragmentary Defractions and Reflexions in all Lights, as preliminary to The Ulterior Reconciliative Statement for which a new Unitary Science roas alone competent. Such was the Grand Cosmical Differentiation of Ideas, prior in order to their Ultimate Integration. From the Primitive Synstasis of Simple Unity, through the Utmost Sectarian Divergency, backivard, but upward, to the Infinite Trinismal Complex Unity, standing in part on the Multifarious Differences of Faith-like the mighty Angel seen in vision by John, with one foot on the land, and one on the sea-such was to be and is the Planetary Evolution of the Unity of tire Race.
1115. Nor, again, is it intended to be affirmed that all views are alike true in such a sense that There is no possibitity of Error, or No difference betwoen Truth and Error. What is intended is, however, emphatically to assert: That tife Greatest of all Errors-that in which the Whole World has been, and mainly now is, involved, and from which it can only be withdrawn by an adequate Scientific Solutionis Partialism, or the Denial of Opposite and Different Truths or Aspects of the Truth from those which men hold to or affirm; and that when this greatest of Errors begins to be radically rectified, then only shall we be in a fit mental condition to adjudicate the minor questions of Right and Wrong, in Details of Statement, and of Relative Rank, between the diverse Doctrines of Mankind.
1116. It is, in fine, meant to be affirmed, That the Conflicting Aspects of Truth in the MForal World are no less infinitely numerous and difficult of Adjustment-uhile yct intrinsically no less harmonious-than the Aspects of Matcrial Existence which the Universe presents for our inspection and study; and that until we have as thoroughty exhausted the Comparison of the Aspects of the Ideal World, as Science is
now doing for those of the External Cosmos, we are mentally incompetent to organize the Theology of the Future,-the latest of the Sciences destined to be developed, and the Highest in Rank.
1117. The True Religious Sentiment and Character, for this hour, and for all coming time, is, then, Utter Consecration and Absolute Devotion to ALL TRUTH, Lead where it MAY; to INTELLECTUAL TRUTH, addressed to THE UNIVERSAL FACULTY in Man, as well as to, and in just preponderance over, Inspirational and Observational Truth, whether of the External or the Internal Senses, addressed to the Particular Faculty in Man, (a. 5-9, 33, t. 204), -the Recognition of the Governing Preponderance, in fine, of Logicism over Arbitrisis ( $\mathbf{t}$. 349) throughout, or in all Spheres; together with a like Consecration and Devotion to The Universal Good in Preponderance over all Individual Aspirations; and then, in Subdominance, to the Individual Good and Desires of All (a. 35, t. 204).
1118. We shall thus have, for the first time in the history of the Race, a Religion internally provided with the means for the Correction of its own errors; and the Religious Sentment of Mankind for the first time Converged, Centered, and Intenstfied upon a wise Progression, instead of the mere Guardianship of the Modicum of Truth supposed to be already possessed; a Religion vital, expansive, perpetually developing, instead of the Closed Circuit and dead Corpus of the Ancient Utterances of the Saints; while, nevertheless, it will rehabilitate, hallow, and cherish those early Truths whispered by Inspiration to the attentive ear, or caught by the quick observations of the Infancy of Mankind; and will love and exalt the Simple Good done by the Little Ones of Earth in all Time, who may be, or may have been, ignorant of the Grander Sweep of the Universal Principles and Laws destined to realize the Intellectual Unification of the Race.
1119. The just and appropriate Hierarchy of the Masculoidal and of the Infanta-Feminoidal (c. 24, 37-39, t. 136) Elements of the Social Organismus will thus be, for the first time, Constituted; and the Orderly, Organized, and Reflective Procedure of All Human Affairs will come to replace the Instinctual, Incoherent, Tentative, and Disharmonic Procedure of the Past. c. 1, 2,

Commentary, t. 1119. 1. The Logical Order (t. 6) and The Logicismal Regime, (t. 349-351), in the Constitution and Administration of All Spheres are Tie Masculismus of Universal Being, as The Natcral or Historical Order and The Arbitrismal Regime are The Feminismus. It has been stated that Man Universally, repeats Man Sexually, or Man Male; and that The World (of Nature) repeats Woman, (t. 1065); or, again, more largely put, God, as Spiritual and Typical Man, repeats Man as Father and IIusband; and The Created Universe, cehoing the Material World, and hence Nature, eminently repeats Woman, as in the joint Conception of Progeny (as allied with the Infant) and as Bride and Universal Mother or the Teeming Womb. Man is, therefore, in this Aspect, the Image or Eidolon, and Woman a Basis or Footstool (t. 2); Man the Head, and Woman the Trunk (t. 453); but all this is in Mere Preponderance, (t.526), and as suggestive, in a figure, of the true Relationship. In the Reality both are loth, and each is all, with the difference merely of the Typical Order of Development. Man Male, or the Masculismus, is Reason First and Sense Second; Humanity First and World Second; or God First and Universe Second ; and Woman, or the Feminismus, is Sense First and Reason Second; World First and Humanity Sccond; or the Universe First and God Second. All this Inherently, ( $\mathbf{t}$ 754), or in Repetitive Correspondence (t. 31) ; while yet Apparently, (t. 754), or in respect to Tendential Correspondence, the Opposite is true; the Female Mind worships the Logical Order, which makes God First; and the Male (or Scientie) Mind worslips Laws which underlie Nature, and produce even God. So the Complexity reappears and baflles continuously every attempt at absolute Simplicity of Statement. a. 1.

Amotrition, c. 1, t. 1119. It is only, therefore, in a mere trace, in the ultimate results, that the Logicism of the Mate and the Naturism of the Female continue to appear in the perfect outcome of character; while contrariwise there is also a trace, by Terminal Conversion into Opposites, of the contrary manifestation; these two, as well as numberless minor modifications,
meeting and blending into each other in the infinite Complexity of Sexual Relationship and Mutual Charm. Science loses itself finally in the Minuteness and Multiplicity of Details, at the time uhen Intuition, the Artistic Sense, Genius, Sentiment, and Fine Feeling, enter the field, and take up and pursue still the choicest subtleties of discrimination.
1120. To affirm deliberately these Immevse Contrinries: That God is eternally, and Reigns universally; That God is not, and that Law is All in All; That the Universe was created in Time ; That the Universe is itself Eternal and Uncreate ; That the Reason is the Supreme Governing Authority; That the Reason is blind and untrustworthy in The Most Vital Domains of Being ; That Man is born to die ; That Man is born to be immortal; That Sin is always duly and severely panished; That there is no Blame and no Punishment, and consequently no Sin,-and so on to the end of a huge catalogue of Doctrinal Differences;-to affirm all of this, with the deliberate intention that Each Affirmation shall be accepted as true, and as part of the Larger Complex Truth, is, seemingly, to introduce a New Order of Mystery ; but it is a Mystery perfectly Solvable and Comprehensible by the Euman Intellect, by the aid of Analogy.
1121. How tremendous are the Contradictions which Science has already tanght the Enlightened Intelligence of Mankind to accept, in the Physical World! Could any belief have been more thoroughly radicated in the Natural and Primitive Convictions of the Race than that a Single Fixed Point in the Sky over our heads is Up, and that another such Point beneath our feet is Down ; that the Solid Material Earth, on which we live,
2. Man is, in other words, Head First, and Trunk Second, and Woman is Trunk (or Abdomen and Pelvis) First, and Head Second; but both are both-Head-and-Trunk in the perfection, each, of their Seceral Types of Development; and so of The Masculismus and the Feminismus of the Total Scheme of Being; and so in fine of The Tivo Grand Opposite Doctrines in Religion, Philosophy, and Practical Life, which have ever divided, and in a sense ever must divide, to the utmost the Simple Unity of Mankind. But it may now be clearly seen that it is this very Difference which is the absolute Ground of their Ulterior Integral and Composite Uxity in the Marriage and Nuptial Harmony of their Organic Contrast. But, agan, the Subject assumes dimensions which repel the attempt here at any adequate expansion. In a word, The Logicisis and the Apbitrisir of Doctrine Blend and Harmonize and Dissolve in the Blissful Ecstasy of their Mutual Embrace, and survive only in the more Manly and Womanly Forms of a New Composite Philosophy and Life.
must have a still more Solid and Material Foundation beneath it on which to rest? In three hundred years all this has been changed for the Civilized Nations, and we now accept and find the ready means of Intellectual Reconciliation with the Contrary Propositions: That Every Point in the Sky may be Up, and Every Point Down; That from the Centre of the Earth it is alike Up, to Every other Point in Space ; That the Solid Earth is a Globe Swinging in the Mid-Heavens, with no Material Foundations of Support whatsoever ; and so on through an immense list of the utter Reversals of Primitive Beliefs, and of Contradictory Statements, each of which is, nevertheless, intelligently and undoubtingly held to be true.
1122. All this results from the simple recognition of the Doctrine of Diversity-of-Aspects-from-Different-Points-ofViero, which the Intellect propounds, but which the Simplistic Faith of Childhood ignores and arrogantly repugns. The Adult Age means the Replacement of Primitive Simplisms by cautiously defined Adjustments, the Product of Science or Systematized Observation and Thought.
1123. It is this Radically Revolutionary Reconsideration of Every Question of Doctrine-Moral, Sociological, and Thicological-to which the World is now summoned by the Positive Discovery of a proper Science of tire Universe. The power, in the New Ideas, for ultimate Conviction is simply irresistlble. The New Catholicity will rapidly prexail. Integralism will replace Partialism. There remains no question but the question of Time. If Three Hundred Years have more than sufficed to reverse or modify the whole current of opinion, with Intelligent Humanity, upon the Theory of the World's Structure ; now, with the Accelerated Progress of Events, in the Mental Evolution of the Race, Three Tens of Years will more than accomplish as much for All Doctrinal Opinion and Beliefs. Every Grand Aspect of Thought will be Scientifically defined, and the sense in which it is tenable will be precisely illustrated in the Material World. Harmony
will grow out of̂ Dissension and Discord; Clearness and Ineffable Beauty out of Mystical Dogmas and Doctrinal Confusion. The Most Stupendous Composite Variety will be substituted for a Central Undeveloped Unity, as of the Old Catholics on the one hand, and, for the Divergent Isolation of Individual Centres, like that of Protestantism, on the other. Each will surrender the vicious Aspiration to be the whole, for the better honor of being a Constituent Entity of the Infinite Republic of Truth and Goodness, and Organized and Orderly Operation, in all the Affairs of Mankind. The New Jerusalem, the Holy City, will have desceended (t. 948). The Day of Judgment will have virtually come (t. 416, 425). The Books will have been opened. The Judgment will have been executed. The Final Restitution of ALL THINGS will have been accomplished. The GRaND RECONCILIATION will Have been effected ( t . 73; c. 39, t. 136; c. 6, t. 345).
1124. I have thus laboriously brought to a conclusion that Preliminary Treatment of Universal Doctrine upon which I have thought it fitting to bestow the name of Basic Outline of Universology. It will belong to other and subsequent works, appearing, it is hoped, at appropriate intervals, to rear the Framerwork upon this foundation, and to present what I may be individually able to accomplish for the finishing and furnishing of the New Temple of Truth. Whether this Treatise shall meet at once with the welcome reception and grateful appreciation of many minds, -the anticipation of which has served to brighten my solitary pathway in the deep recesses of abstract contemplation for thirty years, - the Event alone can determine. A painful responsibility is at least in some measure discharged, and will be hereafter, in part, cast on the World. Precisely "of the hour knoweth no man." The Signs of the Times may indicate, and Science may confidently predict; but the Prevision of Science, in this behalf, is not yet perfectly secured from the possibility of error. The Principles of Universology are
held to be Infallible; but no personal Infallibility is claimed for its exponent. The highest Scientific Probability is not Absolute Certainty. If there is theu still delay to be anticipated; if the hour of birth is prolonged, or is not yet, let us also be prepared philosophically for that disappointment, as the test of our Faith. For one, the same patience which I have summoned to enable me to do, shall be summoned again to enable me to wait. "They also serve who only stand and wait." At least, having now accomplished a First Stage in my Labors, I shall seize the opportunity partially to rest, while yet busily and even laboriously engaged in the preparation of other ulterior and related Works.

## DIGESTED INDEX

TO THE

## BASIC OUTLINE OF UNIVERSOLOGY.

Introduction.-This Digested Index is to be regarded as something more than a mere Index. It is, in fact, an inherent portion of the work itself, or it may indeed be said to be an additional Work, throwing a new light upon the former one. Universology is peculiar in this respect: its field of investigation is-not Particular Things or Particular Domains even, as Separate Entities-but the Relations between all Things and Domains whatsoever. The force of the Main Exposition is, therefore, constantly and inevitably obscured and weakened by the necessary preliminary exposition of the Particular Things and Domains between which it is then intended to intervene. This difficulty is in a great measure relieved by the kind of exhibit made by a thorough Index. In it, the Relationships between subjects remotely presented in the body of the work come strikingly forward upon the same page, or, it may be, in a single line. The Index is, in itself, therefore, a Tabulated View of the Comparology of an immensity of diverse subjects, such as could not be so effectively contrived, perhaps, in any other way. This is in addition to its ordinary value as a means of referring to the points cited in the leading work; so that the student will not, I think, regret time given to poring over the Index, irrespective of its more ordinary uses; and in this view, he may not perhaps find it so dry, accompanied by the Vocabulary, as might at first be apprehended. For explanation of the Abbreviations see Notice to the Reader, p . xl.

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[^0]:    (1) This arrangement is not now applicable, and all Communications of the kind should be addressed to me personally, until further notice.-S. P. A. (1808).

[^1]:    * It will be, I think, unquestionably demonstrated in "The Alphabet of the Universe" that the Hebrew (Semitic) type of lingual structure (language-building) is prior in the natural order of succession, not only to the Sanscrit (IndoEuropean), but even to the Chinese ; if not the oldest possible type. If this be so, the Scientific World will be compelled to return, in this instance, to the Old and Obsolescent Theological Traditionary belicf.

[^2]:    $\underbrace{\begin{array}{c}\text { Sciento- } \\ \text { Philosophy. }\end{array}}$
    Equism, Likeness, Mathematical, Analogical.

    Inequisy, Unlikeness, Difference, Logical.

    Ordinism, Liniar, Serial, Tempic.
    Metaphysical
    Philosopiny. Cardinism, Groupial, Spacial.

    Integerism, Wholes.
    Fractionism, Parts.
    Positismr. Something, Sound.
    Negatisa, Nothing, Silence, (Zeroism)

[^3]:    Pelational, pertaining to the Domain of Re-

[^4]:    Annotation, c. 5, t. 5. O. M. 1. Ethics is the Science of the Individual in respect to his Relations to others in Society. Sociologyis the Science of Society as such, that is to say, as an Organismus constituted of Individuals and of the Grand Complex of their Relations, but differing from the Individual as the whole differs from the parts. More strictly defined, Ethics is the Science of Human Conduct as regulated by the sense in ourselves of Duty towards other Individuals in Society, but in that sense only in which the forum for the decision of the questions involved in the idea of Duty is still the Individual Conscience, and not an External Tribunal.
    2. Sociology includes therefore, Politics, or the Science of Government as well as Political and Social Economy and Jurisprudence, and also extends to and includes The Proper Science of OrganfZation, in the highest application of

[^5]:    Commentary, t. 15. 1. Philosophy tends, as its first Drift, towards the consideration of the Unity of the Universe, To Hen (The One) of the ancient Greek Philosophers ; although in its progress it finds itself compelled to divide into branches. Echosophy (Positive Science) tends, in the first instance, on the contrary, to the investigation of the particular cases of existence, or what Bacon denominates Instances. Its primary Drift is therefore towards Specialization, or the division of the Universe into separate and numerous domains; although it was from the first destined to end in the discovery of a Unitary System of Nature. It is these first and characteristic Drifts of Philosophy and Echosophy respectively, which are indicated by the terms Singuloid and Pluraloid in the Table. We instinctively say most frequently, Substance and Cause, giving to these words the form of the Singular Number, when speaking

[^6]:    (1) Heb. xi. 1.

[^7]:    Annotation, t. 36. 1. The Objective Method of Comte coincides and corresponds with what I mean by The Natural Order, and his Subjective Method with what I mean by The Logical Order ; but the two sets of terms are, by no means, synonymous, and must not be mistaken for each other. By the Objective Method, he intends, indeed, a Procedure from the World to Man (1), practically limiting this term, however, to Man coneretely considered, as the Individual, or in Society. He does not carry the Procedure back of Man, the Concrete Embodiment, to Mind, the Abstract Entity, and therein to the Necessary Laws of Thought, as also the Necessary Laws of Being and the Universal Logic, from which in turn can be traced, in true Logical Order, proceeding outwardly, an Ideal Evolution of the Actual Universe or World, including Man himself as a
    portion of it , in so far as he is a Concrete Object. In other words, he omits or fails of any Metaphrsico-Logical Basis for his scheme of Philosophy.
    2. So, on the contrary, by Subjective Method, he does not here mean Suljective, in the radical sense of the Metaplysicians, but Human merely, in the sense of that which relates to Collective Humanitr. Both Subject and Object, in his use of the terms, are included as Correspondential Subdivisions merely within the "Object," as discriminated from the "Subject" by Kant and others.
    3. The same rectification is necessary for a right understanding of Comte's defence against the popular charge of Materialism. What he distinguishes as Material and Spiritual, are rather what other men would regard as Subdivisions of the Material Domain. Of the Spiritual Domain, as meant by Plato or Swe-

[^8]:    denborg for example, or by Pietists and religious devotion to, and idealization of, Religious Writers generally, he makes really no account whatever. He would indeed create a Substitute for it in a
    the Universal Human World, or Society existing through Time, and in Space;-a cognate but new and different conception.

[^9]:    (1) See "Equitable Commerce," by Josiah Warren, and "Science of Society," by Stephen Pearl Andrews.

[^10]:    (1) His maxim is: On n'a droit que de faire son deroir.

[^11]:    (1) Politique Positive, Vol. I. p. 16.

[^12]:    (1) Syllabus of a Course of Lectures on Physics, by Professor Joseph IIenry, Secretary of the Smithsonian Institution. Annual Report of the Board of Regents of the Smithsonian Institution. Miscellaneous Documents: Senate; No. 5. t , page 19?.

[^13]:    (1) Concerning Feaven and its Wonders, and Concerning Hell -from Things heard and scen,-by Emanuel Swedenborg.

[^14]:    (1) Hagenbach's History of Doctrines, p. 114.

[^15]:    (1) Science of Language by Max Mūller (Lectures, 1st Series), p. 379.

[^16]:    Commentary, t. 100-1. 1. The Earth is a Trunk or Body of which Man is the Head. This whole Symbolism is, however, repeated, within the entire Human Body taken singly, thus: The Trunk or Body proper (the Torso), repeats the Earth, and the Head repeats Man as Head of the World. Again within the Individual Human Head, the Occiput, or Back-and-Base of the Head, is a Trunk or Torso of which the Fore-Head or Brow is the Head; (though in another more Physical Aspect the Nose is the Head of the Head as shown in my Monogram on "The Correspondential Anatomy of the Head and Trunk"). So still again, the Head of the Brow is the Brow proper, also called the Superciliary Ridge, and correctly assigned by Phrenology to the Function of Perception, which is the Head (or-in another aspect, or viewed by reversal in the Opposite Order-the Basis,) of the whole Knowing or Intellectual Faculty. This is Mind strictly so called,-lodged in the whole Forehead or Front-Head. These successively diminishing Repetitions of Analogy; or Augmenting, if we inspect them in the Opposite Order; will be expounded in detail and verified elsewhere. As simply indicated, they will serve here to illustrate the Involution and the Evolution of Analogies formulized in the text. The Involution is a species of Intersusception, like the closing-up of a Telescope. The fearful Railroad disaster, by which one car is thrust and jammed into another, and so involved in it, is called technically among railroad men, telescoping.

[^17]:    (1) Hearen and Hell, No. 181.
    (2) 16 , No. 132.

[^18]:    (1) Heaven and Hell, 133.
    (@) IIearen and Hell, No. 134.

[^19]:    Commentary, t. 120. 1. The Transcendental Metaphysics of Germany, and still more distinctly the Sciento-Philosophy of Universology, are no other than the working back in a new and more definite sense, and as the completion of a cycle, to the point of view at which Fo-hi, the first (or third) Emperor of China, as subsequently expounded by Confucius, began philosophizing in the exact sense which verges on Science. (c. 1, 2, t. 90.)

[^20]:    Commentary t. 128. 1. For an exceedingly able exposition of the Indwelling and Governing Spirit of Each of several of the Older Grand, Religions of the World prior to, or outside of, Christianity, the Student is referred to "The Religions of the World and their Relations to Christianity," by Frederick Denison Maurice, Professor of Divinity in King's College, London.

[^21]:    (1) The Emotions and the Will, by Alexander Bain. Appendir, p. 616.

[^22]:    (1) "Recent British Philosophy," by David Masson, p. 311.

[^23]:    (1) Spencer's Genesis of Sciences.-Illustrations of Univarsal Progress, pp. 128, 130.
    (2) Ib.
    (3) Christian Examiner, March, 1857, p. 213.
    (4) Illus. of Prog., p. 126.

[^24]:    (1) Nature; Addresses and Lectures. Emerson, p. 40.

[^25]:    (1) Association. Synthetic Views of the Doctrine of Chas. Fourier, by Ilippolite Regnaud. Spanish Translation. Cadiz, 1854, p. 163, 170.

[^26]:    (1) Swedenborg's Meaven and Hell, No. 88.

[^27]:    (1) Historical Derelopment of Spec. Philosophy; from Kant to Hegel, pp. 47 ,
    (2) Heaven and Hell, No. 111.
    (\%) George Herbert.

[^28]:    (1) Leaves of Grass. Walt Whitman, p. 230.

[^29]:    (1) The Fractional Family, the First Part of Spirit-Mathematics-Matter, by Arthur Younig, p. 1-4.

[^30]:    Annotation t. 198. 1. "Facts by their Maker; and in knowing only are things made-res gestre, facta. They the Facts, there is no capability for have the nature that is given to them knowing why their nature is thus and

[^31]:    (1) Ifickok's Rational Cosmolory, Introduction, p. 13.

[^32]:    (1) By the "determined Idea" is meant the Transeendental Law, or the Law as it is in the Pure Reason. By Law is here meart Law in the lower sense as revealed in the Fact. Would it not be the better statement then, that the only valid criterion for true Science is the correspondence or coincidence of the Transcendental Law with the Empirical Law, or of the Higher with the Lower Law, or of Deduction with Induction? For the use of the term "determined iden" see end of this extract. (a. 9.)

[^33]:    (1) Article on Philosophy of Auguste Comte, by J. Stuart Mill. Westminster Review, April, 1865.

[^34]:    (1) Tha Avinnal Kingdom, by Emanuel Swedenburg, - Prologne, p. 3.

[^35]:    divided into different kinds, into various orders and degrees; you will observe that, by the ordinary Logical doctrine, each of these kinds must embrace something Peculiar to itself, and also something common to the whole number, however numerous the classes of intelligences may be. Now, what I want to impress on you is this: that each of these kinds of intelligence will know and apprehend partty in conformity with the Pccuiiar endowment of which I hare spoken, and partly also in conformity with the Common endowment of which I have spoken. And what it apprehends in conformity with its Peculiar capacity is Relative Truth; what it apprehends in conformity with its Common capacity is Absolute Truth. This Analysis of the mind into a Common Capacity and a Peculiar Capacity furnishes us, as we shall by and by see, the true ground of the well-known distinction of the human faculties into Sense, Understanding, and Reason." (2).

[^36]:    (1) Lectures on Greek Philosop!!y.-James Frederick Ferricr. Vol. I. Introductory p. 18.
    (2) Ib., p. 24 .
    (3) Ib., p. 25.
    (4) Ib., p. $2 \pi$.

[^37]:    (1) Lectures on Greek Philoscphy.-James Frederick Fc:rier. Vel. I. Introductory pp. 32, 33.

[^38]:    (1) There is a subtlety implied, whether it was cver understood or nct, by the Old Grecks, in this doctrine of Pythagoras which Prof. Ferrier has failed to indicate. In passing from the Elementismus, where the terms percts and upeiron are appropriate, to the Elaborismus of Deing, where monas aud aoristos duas are the proper technicalities, there occurs a Terminal Conveasion into Opposites, which in one aspect reverses the relation of the members in each pair of terms. The monas or One is, in this view of the case, the perus or Limit, only in the sense that it is constituted or eluboruted by the application of the Limit to the Unlimited, and that it is that form of the product which is predominantly characterized by the Limit. It does not, however, then "stand for the Sumeness or Identity in things," but just the contrary, for their Individuality or Separateness and Distinctness from each other, as caused or procured by the insertion of Limits. The monas is in this view Duismal or Anti-

[^39]:    (1) Lectures on Greek Philosophy.-Prof. Fer:icr, Vol. I. pp. ©2-i2.

[^40]:    (1) Lectares on Greek Philosorhhy.-Prof. Ferrier. Fol. I., p. 75.

[^41]:    (1). Ferrier's Greek Philosophy. Vol. I. p. 114.

[^42]:    (1) Ferricr's Greek Philosophy. Tol. I., p. 138.

[^43]:    (1) Forrier's Greek Philosophy. Vol. I. pp. 231, 233.

[^44]:    (1) Ferrier's Greek Philosophy. Fol. I. p. 237.

[^45]:    (1) Revelation, xxi. 17. See farther, my forthcoming Exposition of the Apocalypse.

[^46]:    Commentary, t.228. Inasmuch as the department of the Universe at large, which is here to be brought into Analogical Relations with Number or the Numerismus, includes the Basic Discriminations of Ontology only, and as the Basic Discriminations of Ontology are the Elementismus of the Universe at large, it follows that it is the Elementismus of the Numerismus only which will here come into play. This Elementismus relates to the Elements of Number, and still predominantly therefore to Unism and Duism, and similar MetaphysicoNumerical Considerations. The Elahorismus of Number gives, on the contrary, such discriminations as Arithmetic, Algebra, and the Transcendental Calculus, and the Real Analogues of these Departments of Science will come into play later, and will assume somewhat more prominence in connection with the Sci-ento-Analogy of Form in the two next following Chapters. This simple statement is more elaborately made in the following paragraphs of the Text.

[^47]:    4. The Diagram also illustrates another Subtle and Inportant Principle of Universology-Loyalty to the Dominant of the Domain (t. 523); that is to say: In the Distribution of The Concrete the Instrument emplojed is The Abstract, and woithin it The Principle of Abstractism (as of the Abstract Sciences, Fig. 2), occupies the Central and Governing Position. It is, in other words, The Dominant, to which the Extremities are Subordinate or Loyal; while, on the contrafy, in the Distribution of the Abstract, the Instrument employed is the Concrete (inasmuch as we measure any object not by itself, but by its Counterpart), and hence, here, it is the Concrete Department (Geometry in respect to the Mathematics), or the Principle of Concretism which occupies the Central and Governing Position, and is The Dominant to which the Extremities are Subordinate or Loyal.
    5. Not only, however, is Centre a typical Position of Governing or Reigning character, but Aboveness, or Superior Height, as the place of the Head above the Body, is so also; and Nature is never satisfied until she has reconciled, by combining these Two Positions, as at the Apex of a Cone, with each other. In this sense, by a further distributive operation, the Higher and the Lower Concretes (Fig. 2) are both carried below, where they stand side by side as the two Halves of the Body, and the Middle Region, the Abstract, is carried above as the Head, which then reconciles by uniting the Central with the Superior Pesition. See for illustration of this complexity the Text No. 29; Table 5 ; and Typical Tableau of the Universe, t. 41.
    6. If then the Middle Region of the Abstractismus of Science, namely Geometry and Mechanics, in the Distribution of Conte (see this Commentary Dia.
[^48]:    (1) Let not the shoemaker go beyond his last; let no one venture to judge ontside the limit of his own domain.

[^49]:    Commentary t. 314. 1. The illustrations of Relations as the subjectmatter of Systematology, given in the Text, namely Class, Genus, Species;

[^50]:    They may, no doubt, be treated according to the simple Enumeration of the ancients, which, however, was so crude an Induction as hardly to be worthy the name. But the powerful Induction of the moderns, depending upon a separation of nature, and an elimination of disturbances, is, in reference to Coexistences, absolutely mpotent. The utmost that it can give is Empirical Laws, useful for practical guidance, but void of Scientific Value. That this has hitherto been the case the history of our knowledge decisively proves. That it alooys woill be the case is, in Mr. Mill's opinion, equally certain, because while, on the one hand, the study of Uniformities of Succession has for its basis that absorbing and overruling hypothesis of the Constancy of Causation, on which every human being more or less relies, and to which philosophers will hear of no exception; we, on the other hand, find that the study of the Uniformities of Co-existence has no such support [in the absence of any knowledge of Scientific Analogy], and that therefore the whole field of inquiry is unsettled and indeterminate. Thus it is that if I see a negro suffering pain, the law of causation compels me to believe that something had previously happened, of which pain was the necessary consequence. But I am not bound to believe that he possesses some property of which his woolly hair or his dark skin are the necessary accompaniments. I cling to the necessity of a uniform Sequence; I reject the necessity of a uniform Co-existence. This is the difference between

[^51]:    (1) Essays by Thomas Henry Buckle, pp. 90-97.

[^52]:    5. "No better statement than this of the extent to which modern Thought has penetrated, and of the limitations necessarily imposed upon it, viewed from the Inductive or Baconian point of view, can probably be found in the works of any writer.
    6. "The truth of the statement contained in the first paragraph of the above extract-that the business of Logic is to arrive at a knowledge of the Laws of Causation-will become more apparent on reference to Diagram No. 4, t. 188, where the converging crooked lines represent Induction, and the diverging straight lines represent Deduction. The effort of the inductive inquirer is, literally, to arrive-by means of the single line of his investigation-at that point in the progress of his labors where Causation actually takes its rise. It is an inquiry in the backroard-tending direction, so to speak, toward origins, or causes, with the end constantly in riew, and necessarily hoped for, of obtaining such a knowledge of those causes or origins as will enable him to reverse all his operations, and by the adoption of a Deductive method, to previse Co-Sequences in respect to an Order analogous with Tme, and with no hope, even, as shown by Mr. Mill, of deducing Co-Existences, which pertain to an Order wehich is anulojous with Space.
    7. "The investigation of Sequences-which is, then, the sole province of Logic (Catalogic)-involves progress in a single line, either forward, as OrdI-
[^53]:    (1) Schwegler's History of Philosophy. Seelye, p. 347.

[^54]:    (1) Classification of the Sciences, pp. 6-11.

[^55]:    (*) "The objection to the word Sensationalism, as defining the theory of the resolvability of all Truth, or Knowledge or Faculty, into Experience, is that some who hold the theory would repudiate such a name for it. The objection to the name Empiricism is, that it imports mere popular prejudice into a philosophical question, by calling up associations with the word 'Empiric,' as used in an opprobrious sense. As Mr. Mill has used the adjective 'Experiential' as unexceptionally conveying the meaning for which a word is sought (Article on Conte, in Westminster Revieno, April, 1865), perhaps the substantive Einperientialism, though crude to the ear, might be brought into use."
    (1) Recent British Philosophy, pp. 34, 40.

[^56]:    (1) Recent British Philosnnhy. Misson, rn. in-7.

[^57]:    (1) Recent British Philosophy, pp. 227-230.
    (2) Consult Morrell's History of Philosophy for a well-digested and extensive Tabulation of Megel's Distribution of the Sciences.

[^58]:    (1) Syllabus of a Course of Lectures on Physics, by Prof. Joseph Menry, Secretary of the Smithsonian Institution-head, Somatology. Annual Report of the Board of Regents, U. S. Senate, Misc. Dcc. No. 51, 34th Congress, third Session, 1856, p. 192.

[^59]:    Commentary t. 421. 1. Such rather is the Celestial Hearen or Ultimate Harmonious Development of Humanity in its Divinized State as contemplated by the Philosophy of Integralism. It will be shown at various points that the Conceptions of Swedenborg were everywhere limited and, in a sense, crippled, by the omission of the true Logicismological point of view. They abound in the Spirit of Intellectual Truth, without the rigorous exactitude of Science. The Religion of the future will have its basis in a Pure Rationalism, while subsuming and revivifying all the Old fervor of Sentiment. The Arcana of Christianity, by the Rev. Thomas L. Harris, claims to be an unfolding of the Celestial Sense of the Divine Word, and so to be founded upon, while yet transcending, the Exposition of "the Spiritual Sense of the Word" by Swedenborg. There is in it certainly a superadded Element of Sentimental Ideality, a Celestial Element, undoubtedly, but coupled in this work with a positive diminuition of the Intellectual Element, as compared with the writings of Swedenborg; whereas, the True Third Degree or Story in this Scale of Ascension should excel in both factors of Mentality, and then in the Perfection of the harmony betwoen them.

[^60]:    (1) Revelations xxi. : 2.

[^61]:    Commentary t. 430. 1. In Victor Hugo's eloquent and impressive introduction to the Paris Guide (1867) he draws a vivid picture of a new and wonderful nation which is to arise in the world during the coming century. With this nation the Millennium will not only commence, but will attain an extraordinary degree of development. "It will abhor war, and will find it impossible to see the difference between 'the purple of the general, and the red of the butcher.' It will regard the slaughter of a Waterloo or a Sadowa with as

[^62]:    (1) Plan of the Creation, p 274

[^63]:    (1) Politique Positive. Vol. IV., p. 173-:S0.

[^64]:    (1) In another sense it is more true to represent Man as a Major Mode of both Light and Heat, and Wuman as a Minor Mode of the same; Light shaded and Heat reduced to Warnith; Power modulated

[^65]:    into Feniality, Gentleness, and the extreme delicacies of Feeling and Fnowing. The subject is the focus of all complexities, and cannot be exhibited in its many-sidedness in a few paragraphs. If injustice is done, in this estimate, to the qualities of either sex, the Method is adequate when followed further, to rectify all mistakes, and to conduct to an exhaustive and satisfactory solution.

[^66]:    (1) See Analogical Anatomy of the Head and Trunk.

[^67]:    (1) By E. L. \& A. L. Frothingham. (2) Ib., Vol. I. p. 82.

[^68]:    (1) When an Odd Number is to be angmented, or to receive a Higher Intensity, it is done by ascending a degree in the Natural Series ; an Even one, by a Higher Mathematical Power;-Naturoidal and Scientoidal Methods, respectively.

[^69]:    (1) "The numbers Two and Four, in the Word, are predicated of Goods, and signify them; and the numbers Three and Six, of Truths, and signify them." Apocalgpse Revealed, No. 322.

[^70]:    (1) Tulk's Aphorisms on the Laws of Creation, as displayed in the Correspondences that subsist be-

[^71]:    Commentary t. 52\%. 1. For the principle of Overlapping I am indebted to Fourier, although he has not discriminated its exclusive appropriateness to concrete spheres. His French technicality for the principle is Engrenage. It stands also intimately related to another Principle announced by him as the Contact of Extremes.

[^72]:    Annotation t. .541. 1. Stella is the Latin for Star. The Star or Planet is a World. Stellen, the German cognate
    word, means to posit, put or place. The Relation of World and Nature with Position is thus shown etymologically.

[^73]:    (1) The full Title of this work is as follows: An Introduction to Alwato, the Newly Diccovered Universal Language Developed from the Principles of Universology, and furnishing the Elementary Domain for the full Application and Illucidation of those Principles, by Stephen Pearl Andrewb.-
     "Many Languages for Mortals, one only for Immortals." See Title-page to Bagster's Editions to the Bible.

[^74]:    Commentaryt. 5\% \%. 1. It may not be inappropriate to exhibit, at this point, without waiting for Ulterior Demonstrations, a somewhat larger list of the Natural Analogucs of The Abstract and The Concrete.
    3. To the Abstract echo, or correspond, not merely Light or Slender Form, Iightness of Weight, and Light itself, or the Light of Day; but Light and Slender Objects generally; Light Tones, as those of the Unvocalized or "Whispered" Consonant-Sounds, (the Sounds P, T, K, etc..) and the Sharp or Eropped Vowel-Sounds; the Pure Intellect in the Constitution of Mind, Pure Ideas; Space, (c. 7, t. 9), Ideal and Spiritual Entities, etc.
    3. To The Concrete echo, or correspond, not merely Eeary or Thick Form, Jenviness of Weight, and the tendency to sink down out of the Light, and so to be Dar?, as the Darkness of Night; but Heavy, Thick, and Crude Objects generally; Heavy Tones, as those of the Vocalized or "Spoken" ConsonantComeds, (The Sonants B, D, G, etc.), and the Dull or Full Vowel-Sounds; Feeling in the Constitution of Mind; Mere Sensation; Time and Temporalities, or Low and Material Things generally.

[^75]:    Commentary t. 614. 1. It is part of the Affirmation of Swedenborg, from interior perception, that every Man and Angel is surrounded by a "Sphere" analogous with the Atmosphere which surrounds the Earth, and that the Activities of the Soul extend outward into this "Sphere," so that the Man resides in part, and in a certain sense, outside of himself; comes in fact into contact with the External World, and as it were, with the whole Universe, by virtue of this Sphere. The "Sick Sensitives" of Baron Reichenbach perceived a sort of Magnetic Aura or Luminous Emanation from Metals, and, indeed, from all objects whatsoever, in all varying degrees of brilliancy aud distinctness, somewhat analogous with the Personal "Spheres" of Swedenborg. The Analogies of Universology go to confirm the theory that such is the plan of Creation, and that every object whatsoever has both a Matteroid and a Spiritoid Constitution, somewhat independent, while yet intimately related to each other; that Matter and Spirit-Matter, or Materia and Etheria (t. 62, 63) separated (as they may be partially) from each other, are mere Factors; and that the Normal, Compound, or Composite Constitution, of every thing, an Idea, a Mathematical Point or Line, a World, an Angel, or reverently speaking, of a God even, is a Material Basis with a Spiritual or Spiritoidal Centre and Enrironment. The Analogue and Type of this last is in part the Atmosphere, in part the Infinite Ocean of Ether, the Common Matrix of all Material Objects, and in Part the Emanations and Radiations of all Actual Bodies, permeating and penetrating all Space. The Composity of the two Factors is then Anthropic, Man being the Normal Type of Universal Existence.

[^76]:    (1) See "Correspondential Anatomy of Head and Trunk."

[^77]:    Commentary, t. 639. 1. Theoretically, Every Line is generated from a Moving Point. The Points in the Substrate Space, at which the Moving Point rests, as it were, at each succeeding Instant of Time, make or mark the Line described; but, in theory, these Points are infinitely near to each other, and, hence, confluent; and, hence, the Result is practically not a mere Series of Points, but a Line. The Line, however, still involves the Series of Points, and is in fact, both Line and Series of Points, included in the larger meaning of the word, Line. Let the Line as a Whole be taken to denote Time, and the Line abstracted from the Point-Series is then the Analogue of Duration pure and simple, and the Series of Points is then the Analogue of Succession; for Time subdirides under Analysis, or strictly, has as its Content, these two Elements: 1. Duration; and, 2. Succession, as previously shown. It is, in other words, the Synthet or Composity of the two. Duration is the Statoid or, as it were, the Spaceoid Element within the Composition of Time; and Succession, the Motoid or Tempoid Element or Factor within the same.

[^78]:    (1) See "Language a Type of the Universe," by S. P. A., in the Continental Monthly for June, 1861.

[^79]:    Commentary, t. 416. 1. The novel, and, to the car of the purist in speech, the barbarous, term Thiclith, will be benceforward used in connection with Length and Breadth, to designate the three Dimensions purely as Dimensions, and wholly apart from their plus or minus quantum of Extension. This term will be justified, and its essential necessity as a technicality of the new Science demonstrated in the last Chapter of the Structural Outline, in treating of the Radical Constitution of Language.

[^80]:    Commentary, t. 863. 1. Fourier insists upon the number 12 as the true Basis of Numeration, as that which has the greatest number of divisors. Conte has curiously enough fallen upon the number 7, which, for a Mathematician who would be supposed to have in view practical convenience as well as theory, is not a little surprising. J. Stuart Mill, in criticizing Comte upon this point, has the following: "The number Seven, therefore," (from Comte's love of fanciful System) " must be foisted in wherever possible, and among other things is to be made the basis of numeration, which is hereafter to be septimal instead of decimal ; producing all the inconvenience of a change of system, not only without getting rid of, but greatly aggravating the disadvantages of the existing one. But then, he says, it is absolutely necessary that the basis of numeration should be a prime number. All other people think it absolutely necessary that it should not, and regard the present basis as only objectionable in not being divisable enough. But M. Comte's puerile predılection for prime numbers almost passes belief. His reason is that they are the type of ineductibility : each of them is a kind of ultimate arithmetical fact." (1).
    2. The far greater working convenience of the number Twelve for high mathematical calculations, has been in some measure tested by some of my associates in the labor of practically applying the Principles of Universology in the Special Sciences.
    3. These principles, operating within the Elements of Speech, furnish a convenient naming, by a single two-letter syllable, of each number up to $12 \times 12$

[^81]:    (1) "Later Speculations of Auguste Comte." Westminster Review, July, 1565.

[^82]:    (1) Cjelopedia of Biblical Literature, W. Seven.

[^83]:    (1) Lectures on Metaphysies and Logic: Appendix

[^84]:    Annotation, t. 998, 999. 1. us a decided improvement on his earlier.
    "There is one point in M. Comte's later view of the Sciences, which appears to He ad̃ds to the six fundamental Sciences of his original scale a seventh under

[^85]:    (1) The Temperamerits
    (2) Later Speculations of Auguste Comte, liestminster Review, July, 1565, by J Stuart Mills.
    (3) p. $16 \pm$

[^86]:    (1) History of Civilization In England, Vol. ii. p. 324 .

[^87]:    13. The passage above referred to in which Buckle states the difference between the Inductive and Deductive methods in Science, is as follows:
    "To understand the investigation into which we are about to enter, the reader must firmly seize, and keep before his eyes, the essential difference between deduction, which reasons from principles, and induction, which reasons to principles. He must remember that induction proceeds from the smaller to the greater ; deduction, from the greater to the smaller. Induction is from particulars to generals, and from the senses to the ideas; deduction is from generals to particulars, and from the ideas to the senses. By induction, we rise from the concrete to the abstract; by deduction, we descend from the abstract to the concrete. Accompanying this distinction, there are certain qualities of mind which, with extremely few exceptions, characterize the age, nation, or individual, in which one of these methods is predominant. The inductive philosopher is naturally cautious, patient, and somewhat creeping, while the deductive philosopher is more remarkable for boldness, dexterity, and often rashness. The deductive thinker invariably assumes certain premises, which are quite different from the hypotheses essential to the best induction. These premises are sometimes borrowed from antiquity; sometimes they are taken from the notions which happen to prevail in the surrounding society; sometimes they are the result of a man's own peculiar organization; and sometimes, as we shall presently sec, they are deliberately invented, with the object of arriving, not at
[^88]:    (1) History of Civilization in Cogland. Yol. ii. p. 300 .

[^89]:    (1) History of Civilization in England, Vol. ii. pp. 257, 258.

[^90]:    Ammotrition, t. 10\%\%.1. Professor Dana, of Yale College, has connected his name with the establishment of this
    principle in Science, and to him is due, I believe, the introduction of the term Cephalization.

[^91]:    Commentary, $t$ 1105. Since writing the above my attention has been directed to a very remarkable work, "The Outlines of Analogical Philosophy," by George Field, together with a Synopsis of the same, entitled, "Tritogenea." I was not until very recently aware of the existence of these works, while the drift of the investigation contained in them verges in several respects very

